

*Tasmanian Year Book*



1981

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# **TASMANIAN YEAR BOOK**

**1981**

Frontispiece:  
The West Wall from the edge of a Pencil Pine (*Athrotaxis cypressoides* D. Don) forest, Walls of Jerusalem.

[Edward Gall]





**AUSTRALIAN BUREAU OF STATISTICS  
TASMANIAN OFFICE**



# **TASMANIAN YEAR BOOK**

**No. 15: 1981**

**R. LAKIN  
DEPUTY COMMONWEALTH STATISTICIAN  
AND GOVERNMENT STATISTICIAN OF TASMANIA**



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## SYMBOLS AND OTHER USAGES

The following symbols, where used, mean:

ASIC	Australian Standard Industrial Classification
n.a.	not available
n.e.c.	not elsewhere classified
n.e.i.	not elsewhere included
n.p.	not available for separate publication but included in totals where applicable
n.y.a.	not yet available
p	preliminary—figure or series subject to revision
r	figure or series revised since previous issue
..	not applicable
-	nil or rounded to zero
—	break in continuity of the series (where drawn across a column between two consecutive figures)
(H)	located in Hobart Statistical Division;
(S)	located in Southern Statistical Division;
(H) (S)	parts in both Divisions.

Where figures have been rounded, discrepancies may occur between sums of the component items and totals.

Where reference is made to Acts of the Federal or State Parliaments, the year quoted refers to the year in which the principal Act was passed; all subsequent amendments are inferred.

## VALUES AND MEASURES

Values are shown in Australian dollars (\$) and/or cents (c). Metric units have been substituted for imperial units. The use of dollar currency and metric units has not been confined merely to tables; for the sake of uniformity, they have also been introduced into historical texts. See Appendix B for metric conversion factors.

## LOCAL NAMES OF CERTAIN REGIONS

Tasmanians describe certain regions in a manner confusing to strangers; nevertheless this book employs local usage in most contexts. The chief peculiarities are: *North-West Coast*: The *north* coast from approximately Port Sorell, west to Cape Grim is called the *North-West Coast*.

*North-East Coast*: The *north* coast from approximately Low Head, east to Cape Portland is called the *North-East Coast*. With most of the north coast referred to as either 'north-west' or 'north-east', the term 'north' is rarely applied to this coastal region.

*West Coast*: The Tasmanian *West Coast* may also refer only to the mining settlements of Queenstown, Rosebery, etc. In other contexts, the user may be thinking of inland mountains and rainforests rather than of a coastline.

*Midlands*: The true *Midlands* are probably the Central Plateau but the Tasmanian term means the rural area east of the Plateau and lying along the axis of the Hobart-Launceston road (the *Midland Highway*).

## PREFACE

The *Tasmanian Year Book* is designed to present a comprehensive statistical and descriptive account of the physical environment and of the social, demographic, economic, etc. structure of the State with particular emphasis on change and development in more recent years. In providing a general description of Tasmania, the *Year Book* includes authoritative information on almost every aspect of life in the State. The text and tables are supplemented by numerous maps, graphs and diagrams.

This edition of the *Year Book* (the fifteenth) includes special articles on: The results of recent archaeological research into the prehistory of the Tasmanian Aborigines; the establishment of Launceston's pedestrian malls; forestry on the Tasman Peninsula; the Aberfoyle Tin Ltd mining company; a summary of the debate surrounding proposals for Tasmania's next major power development from the release of the HEC's main Report in October 1979 until November 1980; and on the benefits of the Sydney Futures Exchange to Tasmanian primary producers.

An index of special articles precedes the General Index and covers all such articles included in this and previous issues of the *Year Book*.

This issue also includes a complete list of national parks, State reserves, historic sites, Aboriginal sites, nature reserves, game reserves and conservation areas in Tasmania as at 30 June 1980 together with a map showing the location of major reserves.

As far as possible, the latest available statistics and significant developments which have occurred during 1980 have been embodied in each chapter.

I gratefully acknowledge the valuable assistance given by officers of the various Federal and State Government Departments and instrumentalities and by others who have contributed information, often at considerable trouble and by those who have provided photographs. To the South Australian Government Printer and his staff I express my appreciation for their assistance and enthusiasm in printing the *Year Book*. My thanks also go to Advance Bookbinders who were responsible for binding this volume.

More detailed, and in many cases more up-to-date, statistics relating to most matters treated in the *Year Book* are available in the other statistical publications issued by the Bureau. In addition, unpublished statistics may be available on request. Information about ABS publications relating to Tasmania is provided in the section 'Publication of Tasmanian Statistics' which precedes the Index of Special Articles. Also, at the end of each chapter, a list of 'Further References' relevant to the subject matter of the chapter is included.

The Tasmanian Office maintains an Information Service, which, on request, supplies available statistical information and publications. All publications of the ABS and other statistical material are included in the Office Library which is open to the public for reference purposes. Businessmen, manufacturers, primary producers, government authorities, students and the public generally are invited to make full use of these services. Anyone requiring advice on what statistics are available or which publications may be of most use to them is invited to telephone the Information Officer on Hobart 20 4495.

The *Year Book* has been compiled under the direction of Mr. R. S. White, J.P., B.A., M.A.C.S.; Mr. D. J. Maclaine, B.A., was responsible for editing this issue.

R. LAKIN  
Deputy Commonwealth Statistician  
and Government Statistician of Tasmania

Australian Bureau of Statistics,  
HOBART, August 1981



# Chapter 1

## HISTORY AND CHRONOLOGY

### DISCOVERY

#### The Period of Dutch Exploration

In the works of authors of antiquity, references are found to a land called 'Terra Australis' but it is the Dutch who are credited with the discovery of both mainland Australia and Tasmania. The Dutch, with their trading posts in Java, represented the closest extension of European sea power near the north of the unknown continent and its discovery, either by accident or design, became inevitable.

In 1606, Captain William Jansz in the *Duyfken* was sent from Java to explore the islands of New Guinea and, crossing Torres Straits unawares, coasted along the west of Cape York Peninsula; this was the first of a series of voyages by Dutch captains who, in the next 30 years, acquired some knowledge of the western shores of the unknown land. Not all voyages were undertaken with the aim of exploration—Dirk Hartog's long journey along the western shore of Australia in 1616 resulted from his sailing too far east on the route from the Cape of Good Hope to Java. Some later captains on the same route even regarded the western Australian coast as a suitable landfall before turning north for Java—a commentary on the difficulty of navigation when longitude had to be established by dead reckoning.

In 1642, the Dutch East India Company despatched from Java an expedition of two vessels, the *Heemskirk* and *Zeehan*, under Captain Abel Tasman, with instructions to investigate the extent of the unknown land thought to exist between New Guinea and the western coast of Australia. One immediate aim of the Governor-General, Anthony Van Diemen, was to find a southern route from Java to Chile so that ships of the Company could either trade or plunder along the Pacific coast of South America; a question to be resolved was whether any land mass extending far south blocked such a route.

The original plan was to sail west to Mauritius, to run down to 52° or 54° south latitude and then to proceed east; assuming no land was discovered, it was then intended to turn north in either the longitude of eastern New Guinea or possibly of the Solomons. If Tasman had followed this plan in every detail he might have discovered the east coast of Australia, anticipating Cook's work by more than a century. As it turned out, the extreme southern latitudes were too hostile and accordingly Tasman was sailing east in latitude 42° south when he sighted the mountainous west coast of Tasmania on 24 November 1642.

The Dutch navigator skirted the south coast and made a landing on the east coast for water in Blackman Bay (from an anchorage south of Marion Bay). He then sailed north to St. Patricks Head, crossed the Tasman Sea and discovered New Zealand, returning to Java by a route to the north of New Guinea. Tasman had thus performed the feat of circumnavigating Australia in a single voyage without once sighting the Australian continent.

In honour of the Governor-General of the Indies, he named the first discovery Van Diemen's Land, imagining it to be the most southern extension of the Australian continent, an illusion that was only completely dispelled by Bass and Flinders when they circumnavigated the island in 1798. The Dutch did not follow up the discoveries of Tasman or their other explorers because they were interested in establishing trading posts only among

peoples with a higher degree of civilisation than the natives of Tasmania or mainland Australia appeared to possess. (Tasman's crew saw no natives in Tasmania but inferred their existence from sounds, cuts in trees and the smoke of fires.)

### The Period of British and French Exploration

One hundred and thirty years passed before Tasmania was visited again, this time by the French navigator Marion du Fresne in 1772; he virtually repeated Tasman's original landfall, skirted the south coast and came to anchor in the bay that bears his name (Marion). His visit is memorable for the first contact between Europeans and Tasmanians and for the slaying of the first native by gunfire. Du Fresne himself was killed by Maoris in New Zealand on the same voyage.

A year later, Captain Tobias Furneaux in the *Adventure* became separated from Captain Cook in the *Resolution* on the route to New Zealand and made for Tasmania to obtain water. He eventually anchored off Bruny Island in Adventure Bay but mistakenly believed himself to be in the area of Tasman's original landing which was at least 70 kilometres to the north-east. From this original error sprang a confusion in nomenclature which persists to this day (e.g. Frederick Henry Bay, first named in Tasman's record, appears on maps in an area that Tasman did not even see). Furneaux then sought to investigate the possibility of a strait separating Tasmania from the continent recently explored by Cook, but shoals in the islands bearing his name (Furneaux Group) caused him to abandon the project and make for New Zealand.

In 1777, Cook, on his third voyage, used the Adventure Bay anchorage without detecting Furneaux's navigational errors.

The settlement at Port Jackson in N.S.W. in 1788 put Tasmania on a major sailing route, the First Fleet passing south of the island on its way there. To have sailed north of the island would have invited shipwreck on the Australian 'mainland' of which Tasmania was then believed to be part. In the same year, Captain William Bligh put into Adventure Bay with the *Bounty* on his way to Tahiti and to the famous mutiny; he had been on Bruny Island before, as Cook's sailing master.

Captain Cox of the *Mercury* anchored in the Bay known as Cox Bight in 1789, chartered some of the south coast and explored the strait between Maria Island and the east coast.

The next visitor (1792) was Admiral Bruny D'Entrecasteaux commanding *Recherche* and *Esperance* and searching for La Perouse who had not been heard of since 1788 when he sailed from Botany Bay. The Admiral sailed north hoping to anchor in Adventure Bay, but a navigational error put his ships too far west with the happy result that he discovered the magnificent channel separating Bruny Island from the Tasmanian mainland and was the first to sail up the River Derwent. Leaving Tasmania, the expedition sailed as far west as Cape Leeuwin in Western Australia when it became imperative to take on water. It is an indication of the lack of knowledge then available that D'Entrecasteaux had to return to Adventure Bay to fill his casks. In the same year, Bligh put into Adventure Bay on his way to obtain breadfruit trees in the Pacific for transplanting in the West Indies.

The year 1794 was notable for the visit of Commodore John Hayes who had sailed from India with the *Duke of Clarence* and the *Duchess*; he explored the Derwent as far as Mt Direction and named Risdon Cove, later to be the site of the first settlement.

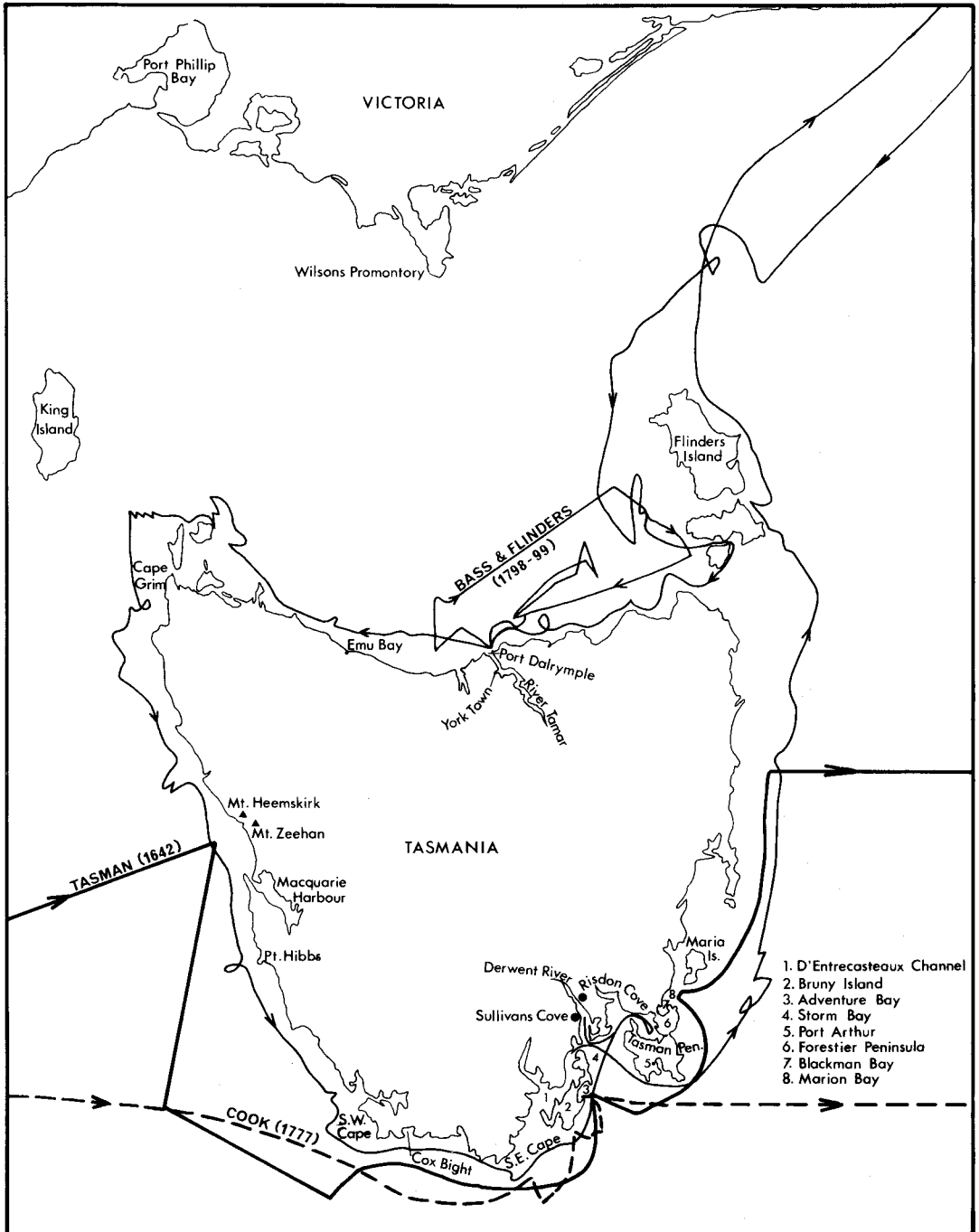
### Tasmania an Island

Two voyages now followed which established that Tasmania was an island. Surgeon George Bass in a whaleboat left Port Jackson in 1797, rounded Wilsons Promontory and discovered Western Port. The nature of tides and swells encountered told Bass that there was no bay but rather a strait of considerable magnitude. In 1798, Bass and Flinders were given the sloop *Norfolk* to decide the question for all time and they circumnavigated the island, commencing on a westerly course along the north coast where they discovered the Tamar Estuary.

### Fear of the French

In the original annexation of Australian territory by Cook in 1770, Tasmania was excluded since the southern limit was proclaimed as 38° south latitude. Formal possession of Tasmania was taken by Governor Phillip on 26 January 1788, when he read his commission to

## TASMANIA: DISCOVERY AND EXPLORATION



the people of the First Fleet at Sydney Cove. Now that it was established that Tasmania was an island, the authorities both in London and Sydney felt that some steps should be taken to block the French from making any claims to possession. The urgency of doing this was underlined by the arrival in D'Entrecasteaux Channel of Admiral Baudin with the *Geographe* and *Naturaliste* in 1802. The expedition's navigator, Freycinet, charted Tasman and Forestier Peninsulas and correctly identified the Frederick Henry Bay of the Dutch era. The expedition then called at Port Jackson before sailing south into Bass Strait where it was intercepted at King Island by Lieutenant Robbins in the *Cumberland*. Announcing his intention boldly to the French Admiral, the Lieutenant disembarked his small company and formally annexed the island in the name of King George III. Governor King at Port Jackson who gave Robbins his instructions was not satisfied that merely formal acts of annexation would block the French indefinitely and decided that permanent settlements were required if British Sovereignty was to be retained. To this decision can be attributed the settlement at Risdon (1803) and the Hobart and Port Dalrymple settlements of 1804.

### Geography of the Original Landing

The State map published by the Tasmanian Lands Department (1:250 000) makes easy the recognition of Tasman's landings on the east coast. His anchorage was near Visscher Island while the first landing was made by longboats which passed through the narrows into Blackman Bay. The second landing occurred in the south-east of North Bay where a lagoon proved too brackish for filling water casks.

The last landing was made near Tasman Bay where the navigator had hoped to take formal possession of the new land. The surf being too rough to get the longboat ashore, the carpenter swam through the waves, planted the Dutch flag and then fought his way back to the longboat.

## SETTLEMENT

### The First Settlement at Risdon (1803)

It will be observed that the original explorers of the Island (including the French) had very largely concentrated their attention on the south-east and, in particular, on the sea approaches to the Derwent. Faced with the necessity for establishing a settlement to assert British Sovereignty, Governor King had a number of possible sites to consider, including King Island, Port Phillip and Port Dalrymple (the Tamar Estuary). His eventual choice was the area of the Derwent Estuary and he reported his intention to the Admiralty as follows:

'My reasons for making this settlement are the necessity there appears of preventing the French gaining a footing on the east side of these islands; to divide the convicts; to secure another place for obtaining timber with any other natural productions that may be discovered and found useful; the advantages that may be expected by raising grain; and to promote the seal fishery.'

Commissioned to make the Derwent settlement, Lieutenant John Bowen sailed from Sydney with the *Albion* and *Lady Nelson*; the two vessels separated in a gale but were anchored at Risdon by 11 September 1803, when Bowen went ashore. The slenderness of Governor King's resources is apparent from the fact that the settlers—free, convict and military—numbered only 49 and that the *Albion* was a British whaler under temporary charter (she caught three sperm whales on the voyage while becalmed).

The responsibility for the choice of the Risdon site attaches ultimately to Bass who had made detailed investigations of the Derwent in 1798 from the *Norfolk*. He had reported as follows: 'The land at the head of Risdon Creek, on the east side, seems preferable to any other on the banks of the Derwent.' It was not surprising, therefore, that Bowen's commission from Governor King directed him to locate the new settlement in the Risdon area. In actual fact, the site ultimately proved unsuitable due to the inadequate stream and the poor landing place; these handicaps were aggravated by the wretchedness of the human material at Bowen's disposal, a characteristic not altered when the camp was increased to nearly 100 persons.

If the settlement has any claim to fame, it derives from an encounter with natives who descended on the camp on a hunting expedition and who were fired on by the soldiers in a state of panic. Whether the future barbarities of inter-racial war could have been avoided is an open question but this encounter was the first phase of a struggle that ended in the extinction of a race.

The final act of the Risdon settlement was played on 9 August 1804, when the *Ocean* sailed for Port Jackson with Lieutenant Bowen and most of his people; Lieutenant-Governor Collins at the new settlement at Hobart had decided to close down the Risdon camp and held such a low opinion of these early colonists that he retained only 13 convicts and one free settler.

### The Settlement at Hobart (1804)

If Lieutenant-Governor Collins had carried out his original instructions, then Hobart today might have been the name of the capital of Victoria situated on Port Phillip Bay. The British Cabinet, impressed by Governor King's warnings on possible French penetration, decided to carry out the occupation of Port Phillip direct from Britain and, to this end, commissioned Lieutenant-Colonel Collins (Royal Marines) to command an expedition in the *Calcutta* with the *Ocean* as tender to secure the strategic Bass Strait. Control of the Strait meant that the dangerous 1 100 kilometre journey around Van Diemen's Land was avoided and also prevented a hostile foreign power from threatening British sea lanes in the South Pacific.

The settlers eventually arrived, via Rio De Janeiro and the Cape of Good Hope, and formed a temporary camp near the site of the modern Sorrento township. For a variety of reasons, Collins was unhappy about the locality; he considered navigation hazardous, the soil poor and water inadequate. He was unwilling to develop promising land at the head of the bay due to the show of strength by large bands of natives and because of its distance from the open sea. Collins had seen the problems of isolation at Sydney and considered a settlement at the head of Port Philip Bay unduly hazardous. With the wind in the wrong quarter a ship could be locked in the bay for several days thereby defeating the purpose of the settlement—a port to protect and control Bass Strait. Accordingly he wrote for advice to Governor King in Sydney and was left free to decide between the River Derwent and Port Dalrymple as possible sites for transfer of his command. He was probably swayed in his eventual choice of the River Derwent by its reputation as a safe harbour and the fact that Risdon had already been settled.

On 15 February 1804, Collins, with the first detachment from Port Phillip in the *Lady Nelson* and *Ocean*, anchored off the new settlement at Risdon. A quick inspection satisfied Collins that the site was quite unsuitable and he made his own reconnaissance, eventually selecting the area on the western bank known as Sullivans Cove and ordering that the expedition should be disembarked with all its stores in the vicinity of Hunters Island. In the same month, Collins reported to King that his two ships were 'lying within half a cable-length of the shore in nine fathoms of water'; the Lieutenant-Governor had selected gentle slopes for his settlement, located a fine stream running from Mt Wellington and found near the mouth of the stream depths of water which would accept the draught of any vessel of his day (or of the modern era).

The following table shows the early composition of the settlement at Sullivans Cove (but excludes details of the Risdon Camp):

Number Victualled at Sullivans Cove, 26 February 1804

Quality	Men	Women	Children
Military establishment .....	26	1	—
Civil establishment .....	6	—	—
Settlers .....	13	5	13
Convicts .....	178	9	8
Supernumeraries .....	(a) 3	—	—
Total .....	226	15	21

(a) Includes one Aboriginal from Port Jackson.

The strength of the Colony was increased to 433 persons in June 1804 when the *Ocean* returned from Port Phillip, where it had taken aboard the balance of the original expedition. From the camp on Sullivan's Cove has sprung the present city and port of Hobart.

David Collins was no amateur in the field of colonisation—he had sailed with Governor Phillip as Judge Advocate in the First Fleet in 1788 and had acted as Secretary to the Governor till 1796 when he returned to Britain with excellent recommendations.

### The Settlement on the Tamar (1804)

While the Lieutenant-Governor was still in Port Phillip Bay, wondering where best to settle, he sent his namesake, William Collins, on a voyage of exploration to the Tamar Estuary. William Collins followed the river up as far as the Cataract Gorge and returned to Port Phillip with a good account of the possibilities of the Tamar for settlement; in his absence, however, the Lieutenant-Governor had made up his mind and was already preparing for the expedition to the Derwent.

Later Governor King received a despatch from Lord Hobart (Secretary of State for the Colonies) who, by a grotesque error, recommended the establishment of a settlement at Port Dalrymple 'upon the southern coast of Van Diemen's Land and near the eastern entrance of Bass' Straits'. If Lord Hobart really meant 'south' then Collins' move to the Derwent had anticipated his wishes. However, since Collins had in fact left Port Phillip, was it not necessary to re-occupy Port Phillip or possibly to watch the Strait from Port Dalrymple? King knew that Hobart's despatch was written in ignorance of Collins' move and accordingly decided to use his own initiative without raising questions of geography with the Secretary for Colonies.

In Hobart's despatch, Lieutenant-Colonel William Paterson (New South Wales Corps) was nominated as Lieutenant-Governor of the new colony. Paterson set sail with 57 soldiers and convicts in the *Integrity* and the *Contest* but after a month of adverse winds both ships were forced back to Port Jackson. A second attempt was made using *Buffalo*, *Lady Nelson*, *Francis* and *Integrity* and increasing the party to 181. This time the Tamar was successfully entered but H.M.S. *Buffalo* went aground and was, with some difficulty, brought to anchor in Outer Cove (George Town) on 4 November 1804. Lieutenant-Colonel Paterson decided that *Buffalo* must be immediately unloaded and accepted the Outer Cove site as a suitable camp while he undertook a more detailed reconnaissance of the Tamar.

Although he penetrated as far as the fertile site of Launceston, Paterson made the extraordinary decision to set up his headquarters at the head of West Arm and founded York Town, while still maintaining small establishments at Outer Cove, Low Head and Green Island. In deciding on York Town, one can only imagine that Paterson was guided purely by the strategic necessity, as was Collins at Sorrento, of being near to Bass Strait and that he gave little thought to the problem of soil fertility and cultivation.

In March 1806, Paterson was willing to admit that York Town was a most unsuitable site and he accordingly moved his headquarters to the present site of Launceston. Today, York Town and Risdon have one thing in common—the almost complete absence of any indication that settlements ever existed.

Paterson, before setting out on his expedition, had been involved in an argument as to his status but Governor King had resolved the matter by dividing Tasmania at the 42° parallel and making Collins and Paterson sovereign in their respective halves, but subordinate to him as Governor.

### THE PREHISTORY OF THE TASMANIAN ABORIGINES: RESULTS OF RECENT ARCHAEOLOGICAL RESEARCH

Contributed by Sandra Bowdler, Dept. of Prehistory and Archaeology, University of New England, Armidale, N.S.W.

#### Background to Research

The Aborigines in Tasmania, in common with the Aborigines of the Australian mainland, were hunter-gatherers when first encountered by Europeans in the late eighteenth century. This means that they grew no crops, kept no domestic animals, had no metal tools, and no system of writing. This does not mean that they were in any sense 'living fossils', as

earlier writers have suggested; they had, as we shall see, a considerable history of change and adaptation to the Tasmanian environment. The hunter-gatherer way of life, here as elsewhere in the world, should be seen as one particular kind of adaptation, which was eminently successful until confronted with the metal-and-gunpowder technology and imperialist mentality of nineteenth century Europeans.

One implication of the lack of literacy amongst the Aborigines in Tasmania is that their complex history before the eighteenth century must necessarily be investigated without recourse to written records. There are of course written records about the Tasmanians in the late eighteenth and early nineteenth centuries, the accounts of navigators such as Baudin and the French scientists who accompanied him, early settlers such as the first Hobart chaplain, Robert Knopwood, and of course the fascinating and informative journals of missionary-conciliatory George Augustus Robinson. These accounts, however, only provide us with the briefest, most fragmentary glimpses of a complex culture already many centuries old, at one point only of its history. The extreme cultural disruption set in train by European settlement in Tasmania, as well as in other areas of Australia such as most of Victoria and New South Wales, means that little knowledge of the original culture survives amongst today's people of Aboriginal descent. In Tasmania, it is true that some of the old traditions have been kept alive; women on Cape Barren Island, for instance, still make shell necklaces as they did before the white people came. If, however, we want to address ourselves to wide-ranging questions, such as 'who were the Tasmanians originally? Where did they come from? How long ago? How have they changed since then?', the only way to approach them is through the discipline of scientific archaeology.

### Archaeology in Tasmania: the Sixties

Modern controlled archaeological excavation only began in Tasmania in the early 1960s. The results of this early research were usefully summarised in an earlier edition of the *Tasmanian Year Book* (1969) by Harry Lourandos. Excavations at two caves at Rocky Cape in north-west Tasmania had produced radiocarbon dates showing that this region had been occupied by people since about 8 000 years ago. The evidence associated with the oldest dates showed that these first inhabitants had been coastal fishermen and sealers limited to the coastal fringe by a dense rainforest hinterland. It was suggested that dates of this age from Rocky Cape, and also from a shell midden on the Carlton estuary in south-eastern Tasmania, coincide with the age of the present coastline (this will be discussed in more detail below). It was therefore suggested that older occupation sites existed on the older coastline, and were now drowned beneath the sea. The overall argument was that the ancestral Tasmanian Aborigines were already settled at the time of establishment of the present coastline, and hence had most probably walked into Tasmania when it was connected to Australia by a land bridge. To demonstrate this convincingly, however, older sites still had to be found.

As well as demonstrating a considerable antiquity for people in Tasmania, the excavations at Rocky Cape, together with excavations at the West Point shell midden on the west coast and at Little Swanport, a shell midden site on the east coast, and Crown Lagoon, a lakeside sand dune site near Lemont in the Midlands, showed interesting changes through time in the Tasmanian Aboriginal culture and economy. At Rocky Cape, between 8 000 and 3 500 years ago, many parrot fish (Wrasse, family Labridae) bones had been deposited by the original inhabitants, who had presumably eaten the fish and left the bones. During the same period, the inhabitants had been making tools out of animal bones, particularly finely pointed implements made out of the fibulae of wallabies (*Macropus rufogriseus*). After about 3 500 years ago, no fish bones or bone tools are found in the Rocky Cape archaeological deposits. This sequence is repeated at the Little Swanport site; and at all other sites younger than 3 500 years, no fish bones or bone tools are found. The historical records contain not a single description of a Tasmanian Aboriginal eating scale fish, nor of the use or manufacture of bone tools.

### Archaeology in Australia

All modern research has tended to confirm the idea that Tasmanian Aboriginal prehistory was intimately bound up with mainland Australian Aboriginal prehistory. Let us look briefly therefore at some recent Australian archaeological research.



Perhaps the most significant discovery of recent Australian archaeological research has been the Lake Mungo site. Lake Mungo is one of a series of lakes, the Willandra Lakes, in western New South Wales, which do not now contain any water. They are large empty basins, with saltbush growing on their floors, ringed on the leeward side by large sand dunes called lunettes. Geomorphological research has shown that these lakes were full of fresh water between about 40 000 and 26 000 years ago, and during this time, human beings camped on the lunette, ate freshwater fish and shellfish, and small mammals, which they cooked in fireplaces, buried the dead men of the community and cremated dead women. They made and used stone tools which archaeologists call horsehoof cores and steep-edged scrapers, which does not necessarily imply they were used for scraping anything. Recent research in the central desert of Australia amongst Aboriginal people who retain something of the traditional technology suggests, by a process of analogical reasoning, that these early tools were probably nearly all used in the manufacture of wooden tools.

Another site of interest is at Keilor, just outside the modern city of Melbourne, Victoria. Here, at the very gateway to Tasmania, human beings are known to have camped and discarded stone tools about 40 000 years ago. At Cloggs Cave, in the foothills of the Victorian Alps near Buchan, people were present about 17 000 years ago, using steep-edged scrapers, pebble tools and bone tools. Bone tools turn up at other sites in southern Australia, dated up to 19 000 years old.

On the Australian mainland, a whole new range of small stone tools turn up in contexts dated between 5 000 and 3 000 years ago. None of these new types have ever been found in Tasmania, either in archaeological contexts nor as surface finds. It is of similar interest that there were no dingoes in Tasmania at the time of European discovery. The bones of dogs are only found in Australian mainland sites in contexts younger than 5 000 years old. While the connection between new small tools and dingoes in mainland Australia remains unclear, there is no doubt of the implications for Tasmanian prehistory. Tasmanian Aborigines have remained isolated from contact with Australian Aborigines since the formation of Bass Strait, a phenomenon needing to be explained in terms of eustatic (world-wide) sea level change.

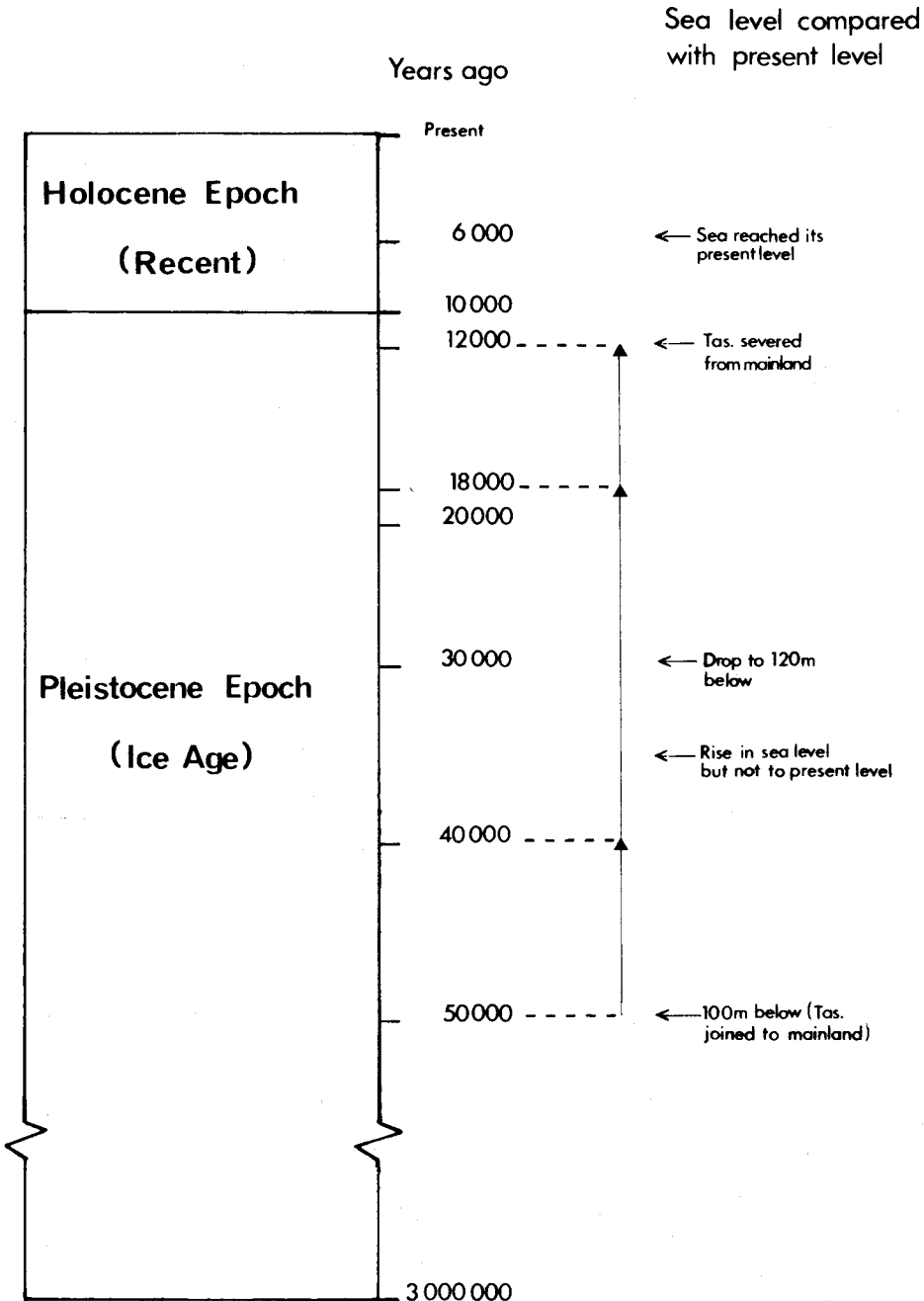
### Pleistocene Sea Level Changes

The Pleistocene is the geological epoch which began about three million years ago, and terminated about 10 000 years ago. The epoch in which we now find ourselves is known as the Holocene (or simply Recent), and began about 10 000 years ago. The Pleistocene is more familiarly known as the Ice Age: a time during which the world's temperature dropped several times, causing massive glaciations in the northern and southern hemispheres. Australia as a whole did not suffer greatly from direct glacial events, although Tasmania did; there were, however, many other environmental effects, some of which we shall return to below. For the moment, one of the most wide-ranging and significant effects was that of changing sea levels. The mechanics of this were simple: when glacial events were at their peak, much of the world's water was frozen up. When warmer temperatures led to melting glaciers, sea levels rose. In a broad sense, these effects were world wide. The timing of sea level changes tends to be slightly different in different areas, however, due to other factors, such as tectonic shifts and warping of the continental shelf. For Australia, geomorphologists have worked out the timetable for sea level changes in the last 120 000 years. Since we have solid proof for the presence of people in Australia over the last 40 000 years, let us look at sea level changes over the last 50 000 years. At about 50 000 years ago, the level of the sea was some hundred metres or more lower than what it is today. This means Tasmania would have been joined to the Australian mainland in the south, and the island of New Guinea would have been joined to the Australian mainland in the north. Kangaroo Island, just off the modern city of Adelaide, would also have been part of this enlarged continent, usually referred to as Greater Australia. Greater Australia would *not* however have been joined to any part of Indonesia or south-east Asia; the ocean floors separating them are much too deep. In fact, Greater Australia has been isolated from the rest of the world by water for the last 60 million or so years. An important fact follows from this: the first people in Greater Australia had to come by sea.

Between 50 000 and 40 000 years ago, the sea level rose again, but not to its present level. There were minor fluctuations, then a dramatic drop to at least 120 metres below its present level, at the height of the last glacial event about 18 000 to 20 000 years ago. As the glaciers subsequently began their retreat, sea levels rose again. By examining the submarine contours

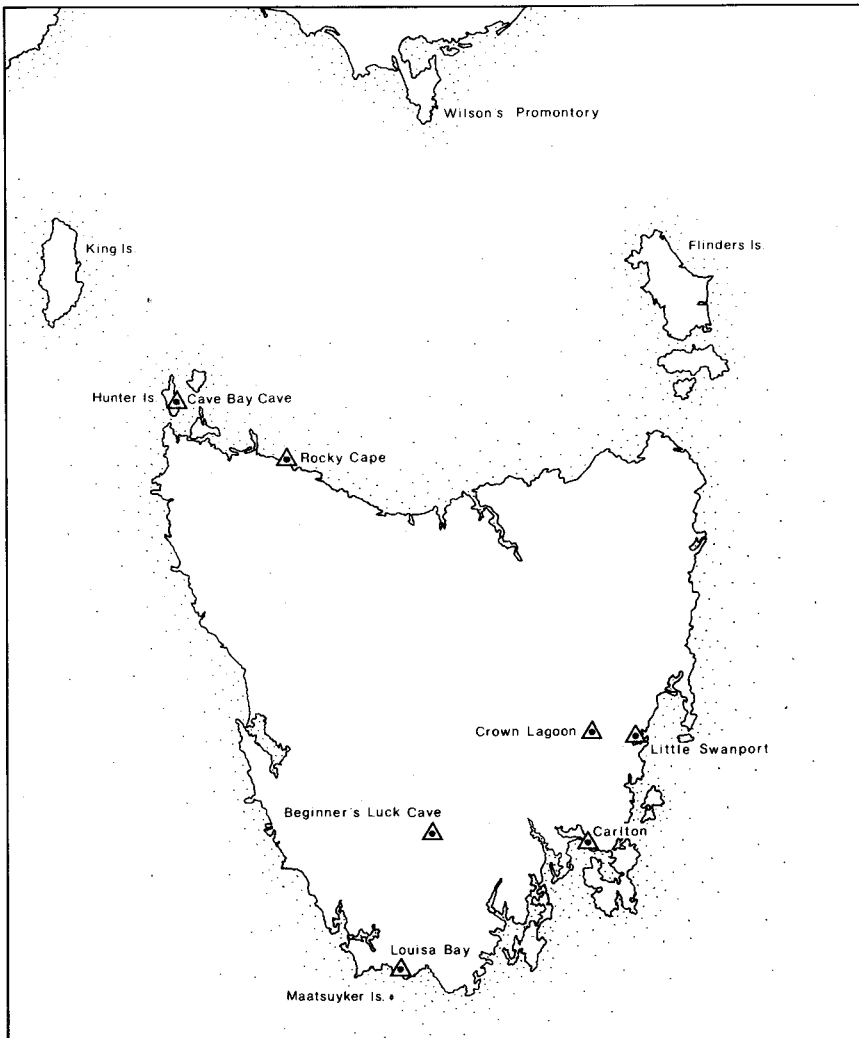
of Bass Strait in conjunction with the curve representing changing sea levels, we are able to say that Tasmania was decisively severed from the rest of Australia about 12 000 years ago. Tasmania as we know it today came into being when the sea reached its present level 6 000 years ago.

## SEA LEVEL CHANGES



### Hunter Island

Recent archaeological research has confirmed previous theories about Tasmanian origins, shed new light on Tasmanian adaptations, and raised new questions to be answered by future research. One such project has centred on Hunter Island, which lies just off the north-west tip of Tasmania in Bass Strait. It is one of a group of small islands, known collectively as the Hunter Islands, which we know from early historical records were visited by the Tasmanian Aborigines in the simple watercraft called by Robinson 'catamarans'. Hunter Island itself is 24 km long and 6 km wide; it is like a long finger pointing to the north. The southern end is 5 km from the Tasmanian mainland, and there are small islets between. Resources on Hunter Island which are thought to have tempted hunter-gatherers to make what is even now a dangerous crossing include seals and muttonbirds (*Puffinus tenuirostris*), an abundant seabird of the petrel family which nests gregariously here and on other Bass Strait islands in the summer. That such crossings were not infrequently made in the recent past is attested to, not only by the historical accounts, but also by the extremely numerous shell middens which have been identified on the island. There are also rock shelter sites, and a large sea cave.



Cave Bay Cave contains what is at the time of writing the oldest known evidence for the presence of human beings on the south side of Bass Strait. It is on the east side of Hunter Island, directly on the coast, and is a large sea cave weathered out of siltstone. The Hunter Island parent rock is related to the Precambrian quartzites at Rocky Cape, and the entrance to Cave Bay Cave is about the same distance above the modern sea level (c. 12 metres) as are the Rocky Cape Caves; it is thought that they, and several others similarly situated in north-west Tasmania, were formed during the last period when the sea level was higher than it is now, some 120 000 years ago.

Archaeological excavations into the deposits within Cave Bay Cave have penetrated to layers which are of unknown age, but perhaps up to 30 000 years old. These oldest layers contain no evidence of human presence. Above them, however, are a series of fire-blackened layers containing stone tools, bone tools, animal bones, and charcoal from camp fires. The oldest of these layers is 23 000 years old. The general sequence appears to be that the cave was first visited by human beings about 23 000 years ago, and then visited with some frequency until about 21 000 years ago, then with greatly reduced frequency until about 18 000 years ago, when visits ceased. Occupation was not then resumed for many thousands of years.

The evidence in these ancient occupation layers tells us about both the people and their environment. Animal bones are found throughout the site's history, even when people were not using the cave, as at other times it was the haunt of Tasmanian devils (*Sarcophilus harrisii*), a carnivore, and of owls. These animals left their own food refuse behind. Also preserved throughout the site's deposits are fossil pollen grains, which allow us to reconstruct the regional vegetation at different times.

The evidence of the animal bones immediately tells us that between 23 000 and 18 000 years ago, Hunter Island did not exist. The animals on Hunter Island today are a limited lot, as is typical of islands in general, and the Bass Strait Islands in particular. It is a general biogeographical rule that the smaller the island, the smaller the number of species which will be found upon it. On Hunter Island now, apart from introduced animals like cattle, horses and sheep, the only mammals are pademelon, a kind of small wallaby (*Thylogale billardierii*), a tiny marsupial insectivore (*Antechinus minimus*), a water rat (*Hydromys chrysogaster*), and a native Tasmanian rat known as the velvet-furred rat (*Rattus lutreolus*). In the nineteenth century there were probably also a species of short-nosed bandicoot (*Isodon obesulus*) and a rat kangaroo (*Potorous apicalis*). In the oldest layers of Cave Bay Cave, we find two species of wallaby (*Macropus rufogriseus* and *M. greyi*), ringtail possum (*Pseudocheirus peregrinus*), wombat (*Vombatus ursinus*), long-nosed bandicoot (*Perameles gunnii*), tiger cat (*Dasyurus maculatus*), native cat (*D. viverrinus*) and more species of native rodents (*Mastomys fuscus*, *Pseudomys higginsii*, *Pseudomys* nov. sp.). Such a range of species could hardly have co-existed on one tiny island; and of course the dates tell us that at this time Hunter Island was in fact Hunter Hill, a small ridge on the plain now inundated by Bass Strait. Most of these animals are modern Tasmanian species; they do however tell us something about the environment at the time, especially those that are *not* now found in Tasmania.

The toolach wallaby (*M. greyi*) has become extinct in recent times, but it was alive in the historical period—but not in Tasmania. Its distribution was restricted to one small area of the Australian mainland, near the south-eastern South Australian border. It was apparently an animal which preferred open grassland country, avoiding thick scrub and woodland. Similarly, an undescribed species of native mouse (*Pseudomys* nov. sp.) is only otherwise known from the treeless plains country of western Victoria. All the mammals present in the lower levels of Cave Bay Cave, as well as constituting a suite of species not found together in recent times, imply an environment consisting of open, grassy country which perhaps extended as far as the South Australian border.

The analysis of pollen remains from Cave Bay Cave supports the picture implied by the mammal remains. Between 23 000 and 15 000 years ago, a vegetation community existed unlike any known today. It was dominated by grasses and small plants of the daisy (Compositae) family. The closest modern analogue is probably the treeless plains of the central Tasmanian plateau. It was during this period that the glaciers of the central highlands of Tasmania reached their maximum extent; the general climatic regime suggested for north-west Tasmania was cold and dry. These conclusions are supported by further palynological (= of pollen), geomorphological and palaeontological research in north-west Tasmania. Such

research on Kangaroo Island, South Australia, has also confirmed the theory suggested by the presence of the toolach wallaby: that an open grassy plain stretched from what is now north-west Tasmania to south-eastern South Australia, much of it across what is now the sunken floor of Bass Strait.

What, then, were the early occupants doing in Cave Bay Cave, and who were they? The abundant remains of charcoal show they were lighting fires and the remains of animal bones tell us something of what they ate. There are problems, however, in making any firm statements about their diet, as there is some mixing of animal food remains with that left by owls and devils. On the whole, however, it seems that wallaby, pademelon, bandicoot, tiger cat and native cat formed part of the Pleistocene Aboriginal cuisine. Plant foods were undoubtedly also part of the diet, but no identifiable remains of these survive. The pollen grains present in the deposit may have come into the cave by a number of means, and cannot be interpreted as having anything to do with the diet. The stone artefacts found consist largely of rather undistinguished quartz chips, and suggest a casual use as *ad hoc* tools, rather than the production here of carefully made implements. On the whole, the evidence suggests a somewhat transient hunting camp, rather than a base camp occupied for long periods of time.

The limited number of carefully finished tools do suggest affinities with mainland Australian sites of similar age—and let us not forget that at this time, Tasmania was part of Great Australia. There is one particularly finely made bone point, which is similar both to those found in Australian Pleistocene sites, and also to those found in later Tasmanian sites dating between 8 000 and 3 500 years old. There is a large stone core implement similar to those from mainland Pleistocene sites, and similar in shape to later Tasmanian tools, but much larger in overall size. There are a number of small steep-edged scrapers, resembling those found in mainland Pleistocene sites. The overall picture strongly supports the theory that the Tasmanian Aborigines and the Australian Aborigines share a common Pleistocene heritage, and that observable cultural and physical differences in recent times stem from 12 000 years of separation.

About 18 000 years ago, at the height of the last glacial event, Cave Bay Cave was effectively abandoned, and was not again occupied by human beings until the sea reached its present level, 6 000 years ago. What was the reason for this abandonment? A related fact is the lack of Pleistocene sites from Tasmania; there is only one other such firmly dated site, which will be discussed below. Why, for instance, were neither of the two excavated Rocky Cape Caves occupied until 8 000 years ago? Both caves constituted desirable residences, as shown by their subsequent intensive occupation. One theory has been advanced to explain these facts, and relates to sea level changes.

### Pleistocene Coast Dwellers?

Let us recall that the first people to come to Greater Australia had to cross an expanse of ocean. Whether this was deliberate or accidental, it is logical to suppose that such voyages would have been made by coastal dwellers, people with a coastal economy. When reaching the new land, the resources which would have been most familiar and hence most easily exploitable were those of the seashore. Let us suppose, therefore, that such coastally oriented people would in the early days have stuck close to the coast. It therefore follows that the earliest coastal sites are now under the sea. The earliest Australian sites known are not on the coast, but they are on lakes and rivers, and at Lake Mungo we see people relying on fish and shellfish. It is logical to suppose that penetration of the Australian hinterland was via the waterways.

The abandonment of Cave Bay Cave coincides with the period of maximum glaciation—which is also the time when the sea reached its lowest level. As we have seen, the Pleistocene occupation layers in Cave Bay Cave may be interpreted as representing the use of the site as a temporary hunting bivouac. Let us suppose that it represents the farthest extent of a territory of a group of people based primarily on the coast; when the sea reaches its lowest level, the coast correspondingly would withdraw to a considerable distance from the site—some 80 km away. Let us further suppose that this is simply too far from the coast for hunters to travel, except perhaps on very rare occasions. Such an explanation covers the general dearth of Pleistocene occupation sites in Tasmania; it must be supposed they are nearly all under the sea.

No other environmental explanation covers the facts. The vegetation was open and grassy, permitting human mobility. The Cave Bay Cave evidence suggests that just as many huntable animals were present in the period 18 000 to 6 000 years ago as between 23 000 and 18 000 years ago. The presence of the water rat further suggests there was no great lack of fresh water in this period. The argument is further strengthened by the more recent archaeological evidence.

### **Post-Pleistocene Coast Dwellers**

After the sea reached its present level, sites appeared around the Tasmanian coast like mushrooms. As we have seen, Cave Bay Cave, now most likely on Hunter Island, was re-occupied 6 000 years ago. The deposit dating to this period is a dense layer of shell midden, showing a high degree of coastal adaptation. Not only shell fish remains, but also some fish bones together with muttonbird bones, penguin bones, and the remains of other coastal species appear as part of the human diet. Stone tools consist mainly of implements made out of water worn pebbles. This is also the case with the oldest layers at Rocky Cape, dated to 8 000 years old. Many Tasmanian sites, rock shelters and open midden sites, are found on the modern coastline dated to between 8 000 and 6 000 years ago, and showing a high degree of coastal adaptation by the occupants. This phenomenon is best explained by the theory that, during the Pleistocene, people were living on a coastline now drowned, and as sea levels rose, coastlines moved inwards, and the people moved with them. That Rocky Cape was occupied at 8 000 years ago, and Cave Bay Cave at 6 000 years ago, is easily explained by the steeper offshore profile at Rocky Cape ensuring that the coast arrived here earlier.

### **Other Bass Strait Islands**

Most of the Bass Strait islands were unoccupied and unvisited by Aborigines from either side of the Strait when discovered by Europeans. Only those closest to Tasmania on the one hand, the Hunter Islands, and those closest to Victoria on the other hand, the Glennie Islands, seem to have been within the reach of Aboriginal maritime expertise in recent times. Even the largest islands, King and Flinders, did not support their own populations of Aborigines. Recent archaeological research has, however, indicated earlier occupation.

Stone tools have been found on Erith Island, Flinders Island and Cape Barren Island. They could, however, be of any age, as they were only surface finds; the general opinion amongst researchers was that they probably dated to some time during the Pleistocene when the land bridge was in existence. Recent discoveries of datable, archaeological sites have, however, produced surprising results.

On King Island, where stone tools had not previously been found, an archaeological site in a sand dune on the modern coast was discovered. Stone tools similar to those from the lower levels of Cave Bay Cave and other mainland Australian sites of Pleistocene age were found, and charcoal which allowed the site to be dated. The resulting date showed the site to be only about 7 000 to 8 000 years old. A similar site at Palana, on the north coast of Flinders Island, produced dates of a similar age.

Once again, we have evidence of people arriving at the modern coastline just as it became established. This does not conflict with the evidence from the rest of Tasmania, but it does represent a puzzle. These sites represent occupation of the south end of King Island and the north end of Flinders Island *after* they were separated from Tasmania. What then happened to these people? Did they somehow escape to Tasmania, or did they simply die out? There is similar evidence from Kangaroo Island, South Australia, and also a useful contrast can be drawn with Hunter Island.

### **Kangaroo Island, South Australia**

Kangaroo Island, like King and Flinders Islands, was unoccupied when discovered by Matthew Flinders. Archaeologists have been aware for many years now of the large numbers of surface sites on Kangaroo Island, consisting of scatters of particularly large horsehoof cores and pebble tools. Until recently, no dates were available, but it was assumed that Kangaroo Island had been first occupied when it was joined to the mainland, and when the sea reached

its present level, the island was either abandoned, or the occupants were trapped there and died out. More recent research partially confirms these theories. A cave called the Seton site contains evidence of two phases of human occupation dating to 16 000 years ago, and to 12 000 years ago. It contains a bone tool and small quartz artefacts similar to those from the older levels of Cave Bay Cave. The assemblages of large tools have still not been dated, but are assumed to be older than those in the Seton site. What is perhaps more surprising is the discovery of coastal sites on Kangaroo Island, some quite recent (comparatively speaking), and dating to only about 5 000 or 4 000 years ago. This is well after the sea had reached its present level, and well after the formation of the island as such. Did these people then leave their island, or did they die out? And if so, why? We do not know.

### Hunter Island: the Recent Phase

The midden layer in Cave Bay Cave which began to be deposited 6 000 years ago while dense, is not very deep. Some time before 4 000 years ago, this midden ceased to be deposited: the site was again abandoned, this time until about 2 500 years ago. This sequence is borne out by that of another rock shelter site on Hunter Island, and the fact that all the open midden sites here so far examined date within the last 2 000 years. One way of interpreting this latest part of the long Hunter Island sequence is as follows. When the sea reached its present level 6 000 years ago, it brought back with it people practising a coastal economy. As on King, Flinders and Kangaroo Islands these people found themselves marooned on islands not big enough to sustain a hunter-gatherer population indefinitely. Those stranded here either escaped by sea to Tasmania, or died out in a short period of time. Unlike the larger islands, however, Hunter Island was re-discovered by Tasmanian Aborigines by sea, about 2 500 years ago. They subsequently exploited the island's resources on a regular and seasonal basis, incorporating it into the complex economic system practised by the Aborigines of north-west Tasmania, until it was disrupted by European settlement.

Thus we see a recent seawards expansion of the territory of the Aborigines of north-west Tasmania which we can assume applies to the other Hunter Islands as well. This expansion might also apply to the west coast of Tasmania generally, where no sites are known older than about 3 000 years; but further work is called for here. In south-west Tasmania, recent work at Louisa Bay shows it was only occupied by Aborigines within the last 2 000 years, and that nearby Maatsuyker Island began to be visited about 500 years ago. The universe of the Tasmanian Aborigines at the time of European contact was thus an expanding one.

### Beginner's Luck Cave

One site remains to be mentioned, which has particular relevance to future development plans in Tasmania. The Beginner's Luck Cave is a site in the Florentine Valley, south-central Tasmania. As archaeological sites go, it is not particularly spectacular; its interest lies in its age and its environmental location. The Florentine Valley in the recent past was, like much of the Tasmanian south-west, densely clothed in rainforest. It has long been assumed that such an environment is unsuitable for human occupation, and indeed all the historical records support the assumption that the Tasmanian rainforest was unoccupied by Aborigines in the recent past. As we have seen however, Tasmanian environments in the last 23 000 years have been far from static.

The Beginner's Luck Cave is a small limestone cave containing a deposit which has been 're-worked'. This means that, because of water action, the deposits have been physically moved from their original place of deposition. Thus some mixing must have occurred, which creates some problems of dating and interpretation. However, detailed and painstaking research on this important site has been carried out, and some things may be said with confidence. About 20 000 to 21 000 years ago, or perhaps even earlier, Beginner's Luck Cave was intermittently occupied by human beings who discarded several stone tools, lit fires and ate wallabies.

At the time when it was occupied, the Beginner's Luck Cave environment was considerably different from what it is now. Rather than being surrounded by impenetrable and resource-poor *Nothofagus* rainforest, the site's environs, 21 000 years ago, would have been comparable to those we have seen in north-west Tasmania—open vegetation supporting



a large animal population. Research indicates that the limestone soils of this region, under the colder drier climatic regime of the last glacial maximum, would have supported a grassland and herffield vegetation interspersed with alpine shrubbery. Access to the Florentine Valley during the Pleistocene would thus have been easier than today, and could have been accomplished via the Derwent corridor.

The essential lesson of the Beginner's Luck Cave is that it is dangerous to make assumptions about where archaeological sites are to be found. The fact that the Florentine Valley in recent times displayed an environment inimical to human occupation, and that this was supported by historical documents, cannot tell us about the remoter prehistoric past. Tasmania has had a long history of climatic and environmental change; its Aboriginal population likewise has had a long history of dynamic interaction with this changing environment. Archaeological sites, which constitute an important aspect of the Tasmanian Aboriginal heritage, are likely to be found anywhere. Development must proceed with caution; enough of the Tasmanian culture has been lost already.

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## CHRONOLOGY

### Preface

The following chronology was originally compiled in two sections, the period 1642 to 1929 from a document specially prepared by officers of the State Archives, and the period beginning 1930 from a search of contemporary newspapers by Bureau officers. Greater detail is included in earlier editions of the *Year Book*.

In the record of more recent years, it was found impossible to describe purely Tasmanian events in isolation since certain national events necessarily form part of the history of a state within a federal system; particularly is this true with regard to some Federal Government decisions, the state of the economy and industrial arbitration. On the other hand, there is the difficulty of deciding which events of a purely local character are sufficiently important to warrant inclusion. Some items have been introduced not because they are important but because they have a strong local flavour. This difficulty of selection is partly avoided by giving the record of the most recent years in more detail but inevitably such a policy results in matters of major and minor importance being mingled without distinction. It follows also that the second part of the chronology is limited largely to what the newspapers of the day considered important and that some events of greater significance may have escaped notice.

To round off the picture of any given year, there is a constant temptation to introduce events of world importance; as far as possible, this has been avoided except where such events had considerable local impact. In no way should the record which follows be interpreted as an

'official' chronology of the State; in actual fact, the record derives from two levels of subjective evaluation, firstly, the selection of items of importance by contemporary journalists and, secondly, the further selection of items from this narrowed field by the compilers of the chronology.

### Chronology of Events from First Discovery of Tasmania

- 1642 Abel Janszoon Tasman, commanding *Heemskirk* and *Zeehan*, sighted west coast and named his discovery 'Anthony Van Diemenslandt'. Landings on Forestier Peninsula and near Blackman Bay on east coast.
- 1772 Landing of a party from Du Fresne's expedition at Marion Bay and affray with the Aborigines.
- 1773 Tobias Furneaux in the *Adventure*, became separated from James Cook in *Resolution* and landed a party at Adventure Bay.
- 1777 James Cook anchored *Resolution* in Adventure Bay on third expedition.
- 1788 William Bligh anchored *Bounty* in Adventure Bay on first breadfruit expedition.
- 1789 John Henry Cox sailed *Mercury* from Cox Bight to Maria Island.
- 1792 William Bligh, on second breadfruit voyage, anchored *Providence* in Adventure Bay. Bruny D'Entrecasteaux, commanding *La Recherche* and *L'Esperance*, discovered D'Entrecasteaux Channel and charted south-east coast.
- 1793 D'Entrecasteaux returned for further exploration of south-east coast. John Hayes, commanding *Duke of Clarence* expedition, explored Derwent River.
- 1798 Matthew Flinders and George Bass circumnavigated Tasmania.
- 1802 Nicholas Baudin, commanding *Geographe* and *Naturaliste*, explored south-east coast.
- 1803 John Bowen's party of 49 made first settlement at Risdon Cove.
- 1804 David Collins' settlement party landed at Sullivans Cove (Hobart). Aborigines killed in an affray at Risdon. Risdon settlement closed down. William Paterson's settlement party landed at Port Dalrymple (Tamar Estuary).
- 1805 Collins forced by famine to cut rations by one-third.
- 1806 Settlers moved from York Town to Launceston area.
- 1807 Thomas Laycock's party crossed island overland from Port Dalrymple to Hobart. First Norfolk Island settlers shipped to Hobart in *Lady Nelson*.
- 1809 Governor William Bligh aboard *Porpoise* anchored in Derwent after N.S.W. mutiny and embarrassed Collins with problem of jurisdiction.
- 1810 Lieutenant-Governor Collins' death. Issue of newspaper *Derwent Star*.
- 1811 Governor Lachlan Macquarie's first visit to Tasmania.
- 1812 Lieutenant-Governor Thomas Davey arrived. Northern settlement at Port Dalrymple made subordinate to Hobart. *Indefatigable* brought first shipload of convicts direct from England.
- 1815 Hobart and Port Dalrymple declared free ports for import of goods. Davey proclaimed martial law against bushrangers. James Kelly circumnavigated island in a whaleboat.
- 1816 First issue of *Hobart Town Gazette*.
- 1817 Succession of William Sorell as Lieutenant-Governor.
- 1818 Death of Michael Howe, notorious bushranger.
- 1820 Visit by John Thomas Bigge to conduct inquiry into colonial administration.
- 1821 Second tour by Governor Macquarie.
- 1822 Penal settlement established at Macquarie Harbour.
- 1823 Passage of British Act 'for the better administration of justice in N.S.W. and Van Diemen's Land'.
- 1824 Inauguration of Supreme Court. Arrival of Lieutenant-Governor George Arthur.
- 1825 First Launceston newspaper, the *Tasmanian and Port Dalrymple Advertiser*, established. Tasmania constituted a colony independent of N.S.W. Establishment of appointed Executive and Legislative Councils. Departure of Governor Darling from Tasmania left Arthur with the authority of Governor (but not the title).
- 1826 Van Diemen's Land Co. sent first party to select land and establish farming operations. Appointment of Commissioners of Survey and Valuation.
- 1827 Lieutenant-Governor received a petition for trial by jury and some representation in Legislative Council.
- 1828 Passage of British Act 9 Geo. IV, cap. 83 which increased membership of Legislative Council. Martial law proclaimed against Aborigines.
- 1829 First settlement at Emu Bay (Burnie).
- 1830 George Augustus Robinson began his mission to conciliate the Aborigines. First use of juries in civil cases. Beginning of the 'Black Line', the military campaign to round up the Aborigines. Publication of *Quintus Servinton*, first novel to be published in Australia. Port Arthur established as a penal settlement.





Lake Judd, Anne Range

[Edward Gall]





Lake St Clair

- 1831 Approval of British Government's new land regulations discontinuing free grants of land, and replacing them with land sales.
- 1832 First shipment of Aborigines to Straits Islands. Establishment of the Caveat Board to settle land disputes and to confirm titles. Maria Island closed down as a penal settlement.
- 1833 Macquarie Harbour penal settlement closed down.
- 1834 Henty brothers from Launceston became first settlers in Victoria occupying land in Portland Bay area.
- 1835 John Batman sailed from Launceston to Port Phillip as agent for the Port Phillip Association. Tasmania divided into counties and parishes. Opening of Ross Bridge. Population estimated as 40 172 persons.
- 1837 Arrival of Sir John Franklin and assumption of office as Lieutenant-Governor.
- 1838 Sessions of Legislative Council opened to the public.
- 1840 Cessation of transportation to N.S.W. and consequent increase in numbers transported to Tasmania. Population estimated as 45 999 persons.
- 1841 Assignment System of convict discipline replaced by the Probation System. Rosbank Observatory for magnetic and meteorological observations established in Hobart.
- 1842 Tasmania created a separate Anglican diocese. Hobart made a city. Peak year for convict arrivals (5 329)
- 1843 Recall of Sir John Franklin and succession of Sir John Eardley-Wilmot.
- 1844 Transfer of Norfolk Island penal settlement from N.S.W. to Tasmanian control.
- 1845 Resignation of the 'Patriotic Six' members of the Legislative Council, over the drain on colonial revenue for support of Imperial police.
- 1846 Recall of Eardley-Wilmot. Foundation of the Launceston Church Grammar and The Hutchins Schools.
- 1847 Succession of Sir William Denison. The Lieutenant-Governor re-appointed the 'Patriotic Six'.
- 1848 Tasmania now the only place of transportation in the British Empire.
- 1850 Foundation of the Anti-Transportation League. Population estimated as 68 870 persons.
- 1851 British Act provided for limited representative government. First elections for 16 non-appointed members of the Legislative Council.
- 1852 First payable gold found near Fingal. Elections held for first municipal councils in Hobart and Launceston.
- 1853 Arrival of last convicts to be transported.
- 1854 Bad floods throughout Colony. Passage of bill establishing responsible government.
- 1855 Succession of Sir Henry Fox Young; title now Governor. British Government approved Constitution Bill.
- 1856 Name of Van Diemen's Land changed to Tasmania. Advent of responsible self-government. Opening of new bi-cameral Parliament with W. T. N. Champ leading first government in the House of Assembly. Re-organisation of Police Department.
- 1858 Council of Education set up. *Rural Municipalities Act* passed.
- 1859 Charles Gould appointed to make geological survey of western Tasmania, Telegraph link established with Victoria.
- 1860 Population estimated as 89 821 persons.
- 1861 Succession of Colonel Thomas Gore Browne. Telegraph cable to Victoria failed.
- 1862 Promotion of scheme for a railway between Launceston and Deloraine.
- 1864 Arrival of first successfully transported salmon and trout ova.
- 1868 Visit by Alfred, Duke of Edinburgh. Primary education made compulsory.
- 1869 Succession of Charles Du Cane. Death of William Lanny, thought to be the last male full-blood Aboriginal. Death of Sir Richard Dry. New telegraph cable laid to Victoria.
- 1870 Withdrawal of remaining Imperial troops. Population 99 328 (Census).
- 1871 Opening of Launceston-Deloraine railway. Tin discovered at Mt Bischoff.
- 1872 Contract concluded for building Main Line Railway.
- 1873 Main Line Railway construction began. Start of economic recovery.
- 1874 Riots in Launceston in protest at rates levied for Launceston-Deloraine railway.
- 1875 Succession of Sir Frederick Weld.
- 1876 Race meetings established at Elwick. Gold nugget worth \$12 200 found at Nine Mile Spring. Death of Trugannini, thought to be last female full-blood Aboriginal. Main Line Railway opened for traffic.
- 1877 Port Arthur closed down as a penal settlement.
- 1878 Increased activity in exploration of West Coast.
- 1879 Settlement of constitutional issue known as the 'Hunt Case'. Rich lode of tin discovered at Mt. Heemskirk.
- 1880 First telephone in Tasmania with line from Hobart to Mount Nelson Signal Station.
- 1881 Succession of Sir George Strahan. Population 115 705 (Census).
- 1882 Increased prospecting on the West Coast.

- 1883 Discovery of the 'Iron Blow' at Mt Lyell.
- 1885 Russian war scare followed by activity in improvement of defences. Formation of Mt Lyell Prospecting Association.
- 1887 Succession of Sir Robert Hamilton.
- 1890 Establishment of University of Tasmania.
- 1891 Collapse of Van Diemen's Land Bank; deep economic depression.
- 1892 Mt. Lyell Mining Co. established.
- 1893 Succession of Viscount Gormanston.
- 1896 Establishment of Tattersalls Lottery by George Adams.
- 1898 Serious bush fires. Tasmanians four to one in favour of Federation at poll.
- 1899 Departure from Hobart of *Southern Cross* (Borchgrevinck) expedition to Antarctic.
- 1900 Departure of Tasmanian contingent to fight in the Boer War.
- 1901 Proclamation of the Commonwealth read. Polling for first elections to Federal Senate and House of Representatives. Succession of Sir Arthur Havelock. Population 172 475 (Census).
- 1903 Celebration of 100 years' settlement cancelled because of smallpox epidemic in Launceston. Suffrage extended to women.
- 1904 Succession of Sir Gerald Strickland at reduced salary.
- 1905 Experiments in wireless telegraphy between Tasmania and the mainland.
- 1907 New Public Library opened; built with gift from Andrew Carnegie.
- 1909 Succession of Sir Harry Barron. Potato crop wiped out by Irish blight. State's first Labor Government under John Earle.
- 1912 Disastrous fire at North Lyell Mine, Queenstown.
- 1913 Succession of Sir William Ellison Macartney.
- 1914 First aeroplane flight in Tasmania. Departure of first Tasmanian contingent to fight in Great War. Formation of Hydro-Electric Department.
- 1915 Serious bushfires.
- 1917 Establishment of electrolytic zinc works at Risdon and of Snug carbide works.
- 1918 End of Great War.
- 1919 First export of frozen meat.
- 1920 Visit by Edward, Prince of Wales. Purchase of site for Cadbury's chocolate factory at Claremont.
- 1921 Population 213 780 persons (Census).
- 1922 Completion of Waddamana power station.
- 1924 First superphosphate manufactured by Electrolytic Zinc Co. at Risdon.
- 1925 Discovery of osmiridium fields at Adamsfield.
- 1927 Inquiry into proposed bridge over Derwent. Visit by Duke and Duchess of York.
- 1929 Serious floods throughout Island. Establishment of automatic telephone system in Hobart. Beginning of economic depression.
- 1930 Export prices fell to half 1928 level. Australian pound devalued so that £1 sterling equalled \$A2.50 (£A1/5s).
- 1931 Depression continued—10 per cent cut in federal basic wage. Initiation of austere Premier's Plan. Conversion loan to reduce rate of interest on internal federal debt by 22½ per cent. Census of population deferred.
- 1933 Commonwealth Grants Commission appointed to inquire into affairs of claimant states.
- 1934 Beginning of 35 years of continuous Labor Government with the election of the A. G. Ogilvie Ministry. Second phase of hydro-electric development commenced at Tarraleah and Butlers Gorge.
- 1936 Tasmania linked with Victoria by submarine telephone cable.
- 1937 Epidemic of poliomyelitis. Economic recovery evidenced by \$0.50 'prosperity' loading added to federal basic wage.
- 1938 Paper mill using native hardwoods established at Burnie. First turbines began operating at Tarraleah power station.
- 1939 Outbreak of World War II.
- 1940 Tasmanians sailed for Middle East with Australian 6th, 7th and 9th Divisions.
- 1941 Newsprint production began at Boyer on the Derwent. Tasmanians sailed for Malaya with Australian 8th Division.
- 1942 Uniform federal income tax commenced.
- 1943 The floating-arch Hobart Bridge opened for traffic.
- 1944 Pay-as-you-earn (PAYE) income taxation introduced from 1 July.
- 1945 End of World War II.
- 1946 Cessation of man-power controls. Rejection by Legislative Council of bill to grant Federal Government price control powers for three years.



- 1947 Court action to stop bank nationalisation by Federal Government. Demobilisation of forces completed. 'Displaced persons' commenced arriving from Europe. Population 257 078 (Census).
- 1948 Forty-hour week awarded to most workers from 1 January. Tasmanians voted 'No' almost two to one in referendum denying Federal Government power over prices and rents. Legislative Council's denial of Supply forced dissolution of House of Assembly—Cosgrove ministry returned to power.
- 1949 Compulsory X-rays introduced in fight against tuberculosis. Clark Dam at Butlers Gorge completed. Theatre Royal purchased by the Government. Sterling devalued by 30.5 per cent and Australian pound similarly devalued.
- 1950 End of federal petrol rationing. Dissolution of House of Assembly granted by Governor and Cosgrove ministry returned to power. Communist Party Dissolution Bill passed by Federal Parliament.
- 1951 *Communist Party Dissolution Act* declared invalid by High Court. Double Dissolution of Federal Parliament. Referendum to give Federal Government powers in regard to communism—'No' vote prevailed although Tasmanians expressed slight preference for 'Yes'.
- 1952 Single licensing authority established for hotels, clubs, etc. State's free hospital scheme ceased.
- 1953 In September, Arbitration Court abandoned system of quarterly adjustment of federal basic wage. State wages boards suspended quarterly basic wage adjustments.
- 1954 Royal visit by Queen. Bill passed to resolve deadlocks in House of Assembly. Foundation of the Metropolitan Transport Trust.
- 1955 Uranium ore discovered at Mt Balfour and Royal George. Bell Bay aluminium plant officially opened. Trevallyn and Tungatinah power schemes officially opened. Anti-Communist Labor Party (later D.L.P.) formed.
- 1956 State wages boards' restoration of 'cost-of-living' adjustments effective from 1 February but these later again suspended. Sir Ronald Cross granted dissolution of House of Assembly. Labor Party returned to power in State. Official opening of E.Z. Co.'s sulphate of ammonia plant. Centenary of self-government celebrated.
- 1957 Legislative Council rejected bill giving aid to private schools. First satellites—Sputniks I and II—seen over State. Centenary of Hobart's incorporation celebrated.
- 1958 Establishment of Rivers and Waters Supply Commission. Public Service Tribunal established as an industrial authority.
- 1959 First election to fill 35 seats in House of Assembly; Labor re-elected. New Federal Government system of grants reduced claimant states to two—Tasmania and Western Australia. *Princess of Tasmania* commenced roll-on roll-off ferry service Melbourne to Devonport.
- 1960 Liapootah power station commissioned. Zeehan-Strahan railway closed. Inland Fisheries Commission created. First Tasmanian telecast. Australian 'give way to the right' rule introduced on roads.
- 1961 *William Holyman*, cargo container vessel, entered Bass Strait trade. Legislative Council rejected equal pay legislation.
- 1962 Catagunya turbines began producing electricity. State Wages Boards granted three weeks annual leave. State subsidies announced for municipal fluoridation schemes. Closure of Mt Lyell railway, Queenstown to Strahan.
- 1963 Abolition of State entertainments tax. Federal Court increased margins 10 per cent and granted three weeks annual leave. Universities Commission recommended medical school for Tasmanian University.
- 1964 T.A.A. commenced intrastate air services. Tasman Bridge opened for traffic. Hobart's water supply fluoridated. Glenorchy raised to city status.
- 1965 *Empress of Australia* sailed from Sydney on first voyage to Hobart. Provisional driving licences introduced. Dental Nurse scheme for schools announced. D'Entrecasteaux scallop beds closed for 1965 season.
- 1966 Decimal currency introduced 14 February. Burnie-Launceston co-axial cable completed. Equal pay for certain State Public Service females. Breathalyser tests approved for use by police. S.T.D. extended to Tasmania.
- 1967 Bush fire disaster of 7 February resulted in 62 deaths and over 1 000 houses destroyed. Federal Arbitration Commission abolished basic wage and substituted total wage concept but basic wage retained in State awards. Mt Cleveland tin mining town of Luina completed. H.E.C. water reserves only 16 per cent of normal; introduction of daylight saving and power rationing.
- 1968 H.E.C. Repulse Dam on lower Derwent completed. Batman Bridge across lower Tamar opened. Federal Government subsidy for apples and pears exported to U.K. and other countries. Full adult suffrage for Legislative Council elections from 1 July 1969. Capital punishment abolished.
- 1969 Parangana Dam (Mersey-Forth scheme) completed. North-West General Hospital opened at Burnie. State election resulted in 17 A.L.P., 17 Liberals, one Centre Party (Mr. Lyons). Mr. Lyons combined with Liberals to form coalition government; ended 35-year Labor rule in Tasmania. Full Bench of Federal Arbitration Commission granted equal pay to females performing equal work; female salaries to be raised to male salaries in stages. Copper smelter at Mt Lyell closed; concentrate sent to Japan and Port Pirie (S.A.) for treatment.
- 1970 First pyrites railed from Rosebery to Burnie sulphuric acid plant. E.Z. Co. to establish \$6.3m residue treatment plant. Royal visit. Parliament legislated to introduce permanent daylight saving. State premiers accepted Tasmanian formula for reimbursement in lieu of receipts duty.

- 1971** \$25m A.P.P.M. Ltd. Wesley Vale paper plant opened. \$9m expansion program at Comalco (Bell Bay) completed. Serious shipping strike. Population 390 413 persons (Census).
- 1972** K. O. Lyons resigned cabinet portfolios and ended Liberal-Centre Party Coalition. A.P.P.M. Long Reach woodchip plant commenced production. A.N.L. vessel *Princess of Tasmania* made her final trip to Tasmania. Mt Lyell Mining and Railway Company Ltd fired last charge at its West Lyell Open-cut Mine. Federal elections—A.L.P. returned to power (after 23 years in Opposition). 300 million years old fossil of dragon fly discovered in Hellyer Gorge (west coast area).
- 1973** First train travelled the Bell Bay rail link. The first legal casino in Australia—Wrest Point—officially opened. Vote extended to 18-year-olds. The \$121m Mersey-Forth H.E.C. scheme officially opened. Storeys Creek tin mine closed down. The *Blythe Star* lost at sea while on charter to the Transport Commission. Tasmania voted in line with other Australian states on prices and incomes referenda—'No' to both.
- 1974** B.H.P. announced \$28.5m expansion project for the Temco ferro-alloy plant at Bell Bay. Workers under State Wages Boards' awards granted four weeks annual leave. Anti-pollution regulations under the *Environment Protection Act* gazetted. Royal commission's report on urban transport advocated cessation of suburban rail services. Transport Commission's ship *Straitsman* sank in Yarra River. High Court ruled Tasmanian tobacco tax valid, but method of collection invalid. Double dissolution of Federal Parliament. Federal Labor Government re-elected. Women under State Wages Boards determinations awarded equal pay. The 140-metre high Gordon Dam completed. No fault third party insurance scheme implemented.
- 1975** Tasmanian suburban rail services ceased. Bulk ore carrier *Lake Illawarra* rammed the Tasman Bridge, leaving a 128-metre gap and causing 12 deaths. Initial federal grant of \$13m for Tasman Bridge restoration announced. T.A.B. began operating. Transmission of colour television programs commenced in Tasmania. Electrolytic Zinc Co. announced the retrenchment of 391 employees following reductions in production. Arbitration Commission adopted wage indexation in principle. Draft Management Plan for the South-West National Park officially released. Plans released for second permanent Derwent crossing. Federal Government takeover of Tasmanian railways. Prime Minister dismissed by the Governor-General and the Leader of the Liberal Party appointed Caretaker Prime Minister pending a general election. Temporary Bailey bridge across the Derwent opened. \$5m Police Academy at Rokeby completed. Hotels allowed to open for Sunday trading. Federal Liberal-Country Party Government elected with a majority in both Houses.
- 1976** Hobart recorded its highest ever maximum temperature of 40.8°C. Family Law Courts established in Tasmania. Mt Lyell Co. reported record losses. 'Nimmo Report' on transport to and from Tasmania released. Investigation of a site for a second Derwent crossing began. A government-commissioned inquiry recommended the abolition of the T.C.A.E. in Hobart and expansion of the northern campus. A Tasmanian consortium investigated the modernisation of the Electrona carbide works, preventing an imminent shutdown. An estimated 5 000 sheep shot and buried following low sheep prices. Mass tuberculosis X-rays phased out. Sea cargo to and from Tasmania to be subject to a freight-equalisation scheme. A.N.L. freight rates increased by 24 per cent following introduction of the direct subsidy scheme. \$23.7m spent on work associated with Tasman Bridge disaster in 1975-76 and \$16m allocated for 1976-77. Cormo sheep, a new breed developed in Tasmania, exported to the U.S.A. A new method of allocating Federal Funds to the states, in the form of a 33.6 per cent return of personal income tax collections, yielded Tasmania \$189m for 1976-77. South-West National Park doubled in size in line with South-West Management Plan proposals. British importers called for changes in the fruit marketing system following the arrival of poor quality apples from Tasmania. *Australian Trader* sailed on last voyage from Bell Bay. Precipitous Bluff to be included in South-West National Park following an agreement by A.P.M. to relinquish timber concessions in the area. A.P.P.M. announced plans for a \$185m expansion project at Wesley Vale. Comalco Ltd began a \$10m expansion project to increase output by 19 000 tonnes per year. Government commissioned a feasibility study on the establishment of a sugar beet industry. Tasmania experienced an 85 per cent eclipse of the sun. U.S. nuclear aircraft carrier *Enterprise* visited Hobart for eight days. Mt Lyell Mining and Railway Co. announced plans to retrench 400 employees. Federal Government announced introduction of south-bound freight subsidy scheme which would apply retrospectively to cargo shipped from 1 July 1976. A 17½ per cent devaluation of the Australian dollar announced on 28 November. Total decline in jobs in the textile industry in Launceston over 2½ years reached almost 1 500. The Neilson Labor Government returned to power with a reduced majority: A.L.P., 18 seats; Liberal, 17 seats (H. of A.). A.N.M. Ltd announced new plant developments which would cost approximately \$13m.
- 1977** Further 73 retrenchments at Mt Lyell brought total to nearly 300 since November 1976. Joy Report on Tasmanian Railways recommended cutbacks in services, freight rate rises and a complete review in 1981. Two-day visit to Hobart and Launceston by Queen Elizabeth and Prince Philip. Federal Government confirmed Kingston as the site for Australia's new Antarctic Base. State Government announced plans to form a commercial film-making corporation. Ida Bay Railway re-opened by commercial interests. Second Tasmanian Military Tattoo realised 33% increase in attendance. State Strategy Plan released. T.C.A.E. F. M. radio began regular transmission. \$25m expansion program announced by A.P.P.M. Burnie. 'Price freeze' officially ended. One km long and 5 x 5 m Gordon Dam tailrace tunnel holed through. Report on education in Tasmania released. State Department of Planning and Development established. Comalco Aluminium (Bell Bay) Ltd began an expansion program to lift output by 20 per cent. South-bound freight subsidy to benefit the State by \$20m for the financial year 1976-77. Radar guns introduced for use by the Police. Military Tattoo cancelled for 1978; State Government announced plans to take over 1979 Tattoo. The Premier, Mr Neilson, announced his

retirement from 1 December to become Tasmania's Agent-General in London. Report of Callaghan inquiry into Tasmania tabled. Federal Parliamentary Public Works Committee recommended relocation of Antarctic Division at Kingston at a cost of \$8m. Japanese-Australian survey of squid resources in south-east Australian waters announced. A \$121m expansion, increasing plant capacity by 93 000 tonnes, opened at Comalco Aluminium (Bell Bay) Ltd. Legislative Council Select Committee report on the Ambulance Commission released. Tasman Bridge re-opened 8 October (closed since 5 January 1975); Federal Government payments for restoration, widening and provision of new and up-graded roads, provision of services on the Eastern Shore and assistance to ferries totalled \$44m. The first 144 000 kW generator commissioned at Gordon River power station. Plans announced for Hobart's \$7m West End shopping mall and car park complex. Federal-State tax sharing arrangements finalised; states to share 39.87 per cent of personal income tax collections from the preceding year. Arbitration Commission granted agricultural workers a 40-hour week plus four weeks annual leave. State Government announced a scheme to provide free conveyancing to first home buyers up to \$50 000 value. Estates passing between husband and wife in Tasmania to be exempted from death tax. Frosts caused estimated \$5m loss to Tasmanian fruit industry. The Federal Government announced a ten-point plan for the growth and development of Tasmania based on the Callaghan Report. Launceston Transport Revision Report recommended the spending of \$25m to upgrade Launceston's road system over the next 10 years. State Fire Authority established. The Prime Minister, Mr Fraser, announced that the Federal Government was committed to the construction of a second bridge for Hobart. Mr Lowe replaced Mr Neilson as Premier following the latter's resignation. The Liberal-N.C.P. coalition returned to office with a substantial majority following the 10 December Federal election; in Tasmania, all five House of Representative seats retained by the Liberals who filled three of the five seats in the half-Senate elections. Mr W. McKinnon (A.L.P.) elected in by-election for the House of Assembly (Franklin). Drought conditions in many parts of the State the worst for 30 years. Severe frost and hail damage to State's apple crop.

- 1978** Large scale drug operation involving the smuggling of cannabis oil to Tasmania from Thailand uncovered by narcotics agents. Direct flights between Tasmania and Sydney introduced on a trial basis. Detailed plans for a second Hobart bridge made public. Professor Peter Wilenski appointed head of an inquiry into the State Public Service. Plans for a \$20m expansion of the Alanvale Matriculation College, Launceston announced. Unemployment in Tasmania reached a post-war peak of 7.3 per cent (Commonwealth Employment Service figures) and 7.5 per cent (Australian Bureau of Statistics figures). Rebuilding of the Lactos cheese factory at Burnie completed after part of it had been destroyed by fire in the previous year. State Government refused to allow mining at Precipitous Bluff. Tasman Limited service was reduced from six to three days per week. The Tasmanian Railways came under full control of the Australian National Railways Commission. Dunlop Ltd announced the scrapping of 300 jobs at its Universal Textiles plant at Derwent Park. Negotiations aimed at producing natural gas from the Pelican Field (80 kilometres north of Burnie) began which could lead to the supply of natural gas to Tasmania and Victoria. Details of IPEC's proposed 'Tiger' cargo service across Bass Strait released. Construction of a State Government office complex and an extensively landscaped pedestrian plaza in Launceston announced. 200 of the 540 jobs at the Universal Textiles plant saved following discussions between the Government and the Company. A 200-mile fishing zone was adopted by Australia. Hobart's gas mains closed and consumers changed over to low-pressure gas. An earth tremor, centred in Bass Strait, shook coastal centres from Penguin to Boat Harbour. It recorded 4.5 on the open ended Richter Scale. Proposal for a new \$28m Claremont Community College announced. Ceilings imposed on the State Government work force required zero growth for the rest of the 1977-78 financial year and a one per cent growth rate in 1978-79. Announced that self-help drive by Mt Lyell Mines had cut subsidy requirement in half. The film 'The Last Tasmanian' made considerable impact overseas. Senator Reg Wright announced his retirement from the Australian Liberal Party in protest at increased Parliamentary superannuation benefits. Tasmanian Education Next Decade (TEND) Report released. The State Government decided not to back the 'Tiger Line' fast-freight project with a \$15m guarantee. The Australian National Railways Commission announced that all regular passenger train services in Tasmania would cease from the end of July. Federal Government gave the go-ahead for the new \$8m Antarctic base at Kingston. A major study of the State's coal reserves, by the Mines Department, revealed a potential deposit of 251 million tonnes in the Fingal Valley. Mr Neil Batt was elected Federal President of the A.L.P. The Federal and State Governments gave the go-ahead for a joint Japanese-Tasmanian fishing feasibility project off the State's coastline. Federal Government confirmed its plans to proceed with the Australian Maritime College at Beauty Point. Bizjets commenced an air shuttle service between Smithton and Essendon (Victoria). The Federal and State Governments agreed to pay up to \$7.6m to keep the Mt Lyell copper mine in operation until mid-1980. The 'stand-by' air fare experiment began. A nine-man Private Forestry Council appointed to serve as an advisory body to the Forestry Commission on all matters relating to private forestry. The Arbitration Commission replaced quarterly national wage case hearings with six-monthly hearings to be held in October and April of each year. The Cartland Committee of Inquiry into South-West Tasmania proposed that an authority be set up to advise the Government on all future land-use in that part of the State. A survey revealed that the introduction of fluoride into Tasmanian water supplies cut the rate of dental decay amongst school children by more than half. The Victimless Crime Select Committee recommended legalisation of homosexuality and relaxation of marihuana smoking laws. Renison Ltd announced a \$20m expansion program at its West Coast plant as a result of increased world demand for tin. Tasmania lost its Military Tattoo to Victoria where the Government offered to provide a \$70 000 guarantee. T.C.A.E. (Mt Nelson campus) and the Hope Foundation were granted special 'F.M.' broadcast licences. The State

Government approved a scheme to research and plan Tasmania's energy policy. This was intended to reduce the autonomy of the H.E.C. by bringing it under direct ministerial control and to broaden its role to cover all energy sources. State Cabinet accepted a recommendation that the Federal Hotels consortium be granted the Northern Licence to build the State's second casino. It was announced that construction of the \$7m country-club style casino could start in early 1979 at Mt Leslie in Prospect Vale. The Tasmanian Government Insurance Office announced its withdrawal from provision of medical and hospital insurance. Announced that a new 'fire tax' levied on dwellings would be introduced instead of payment as part of insurance premiums. The Federal Government agreed with the Tasmanian Government on the establishment of a trial Tasmania-New Zealand air link. Improved World copper prices helped to put the Mt Lyell Mining Company back on the road to a sound recovery. A Federal Cabinet reshuffle resulted in increased responsibilities for Tasmania's two Federal Ministers, Mr. Groom and Mr. Newman. Savage River Mines announced that it would double the area and the life expectancy of its open cut operations. The mine was expected to be viable for 25 years. The State Government officially handed over 13.3 hectares of land at Newnham to the Commonwealth Government for the Australian Maritime College. The first 'Tasmanian Fiesta' got off to a successful start.

- 1979** A joint Federal-State Government study recommended the go-ahead on a \$28m second Hobart Bridge. Renison Ltd announced an \$18m expansion program at its mine planned to boost its production of tin concentrate from 630 000 to 850 000 tonnes per year. Stronger demand by Japan for Tasmanian woodchips. The State Government to expand the South-West Conservation Area to more than 20% of the State's total area with new boundaries in line with those recommended by the Cartland Committee of Inquiry. The Electrolytic Zinc Co. announced plans for the construction of a \$20m sulphuric acid plant at its Risdon works. New domestic air fare structure announced which reduced certain fares by up to 40% during certain periods of the year. Tasmanian oil poppy processors, Tasmanian Alkaloids Pty Ltd, told growers that their crops were not required because of continually declining market prices and restrictive international regulations. The growers stood to lose a crop worth several million dollars. Bizjets was given approval to operate a six-month trial air service between Melbourne and Devonport. A \$10m contract signed for extensions to Goliath Portland Cement's Railton plant. The extensions were aimed at doubling output to one million tonnes per year by mid-1980. MLC Assurance Co., owners of Eastlands shopping centre, announced a \$14m expansion plan for the centre including G. P. Fitzgerald and Co. and K Mart shops, a multi-level car park and an update of the existing building. Mr Charles Woodhouse appointed as the State's first Ombudsman. TAA's marketing manager, Mr K. M. G. Klennett, announced that Tasmania had become the top tourist destination in Australia, replacing the previous leader, the Gold Coast. Launceston to have a central freight terminal as part of a \$20m program to revitalise the rail system in Tasmania. Tasmania's Parliamentary Hansard in operation for the first time. The State Government extended its guarantee to the Electrona carbide works from \$6.5m to \$8.5m. The Chapman Report recommended that the Launceston City Council and seven surrounding councils be replaced by three larger councils. Of the \$1.2m allowed in the State Budget of 1978-79 for assistance to the Mt Lyell Co., only \$200 000 had been drawn. The Premier, Mr Lowe, called a State election for 28 July, 18 months ahead of schedule. A new energy policy involving investigation of fuel production from sugar beet was adopted by the State Labor Party. Electrona Carbide Industries, still critically short of money, was taken over by White Industries, a Sydney-based company, in a \$1m deal. Cascade Brewery's new low alcohol beer went on sale in Southern Tasmanian hotels in draught form. An Education Department study revealed a low level of numeracy in Tasmania's 14-year-olds. The ALP held a five seat majority after the State House of Assembly elections. Southern Tasmania's record winter drought resulted in massive stock clearances and the possibility of disaster for hundreds of farms in the area. The State Government ordered an inquiry into the marketing and financial operations of the Tasmanian Apple and Pear Marketing Authority (TAMA). This followed a seven to one vote of no confidence by fruit growers and Government authority members in the TAMA's executive director, Mr W. A. Smith, who later resigned. Mr Geoff Pearsall was elected unopposed as the new Liberal Party leader. A \$13m retail development was proposed for Burnie. Extremely cold weather closed schools and highways in southern, central and western Tasmania. Aberfoyle Tin N. L. announced a \$16m expansion at its Que River operations and the E.Z. Co. announced a related mill expansion project at its West Coast mine to cost more than \$10m. Aberfoyle (Que River operations) announced that it would sell 2 000 000 tonnes of ore to the E.Z. Co. over a 10-year period. The North-West Acid Pty Ltd plant at Burnie was closed down. The Bowen Park Visitor Centre at Risdon Cove opened to the public. APPM completed a takeover deal worth \$30.6m for Tasmanian Pulp and Forest Holdings after offering \$6.05 per share, \$1 more per share than the amount offered by H. C. Sleight Ltd. Mr Bill McKinnon (Labor), who lost his seat in the July 28 election, filed a petition in the Supreme Court claiming new Labor MHA in Franklin, Michael Aird, breached the Electoral Act by spending more than the statutory limit of \$1 500 on his election expenses. This began the so-called 'Electoral' or 'Constitutional Crisis'. The *Ombudsman Act* officially came into force. The Labor Caucus chose Mr Lohrey as its new nominee for the position of Speaker in the House of Assembly to replace Mr Eric Barnard. Mr Barnard, a former Cabinet Minister and Speaker who had completed 20 years in Parliament, later resigned from State Parliament. Commitments for death duty and land tax relief were honoured in the State Government Budget for 1979-80. Ships over 25 metres in length were prohibited from sailing under the Tasman Bridge during peak traffic periods; in off-peak periods the passage of ships was to have priority and the bridge was to be closed to traffic. A number of major Government Departments were accused of mismanagement, unacceptable accounting and unexplained spending in the Auditor-General's report. Legislation brought the State Government's guarantee to Electrona Carbide Industries to \$10m. The H.E.C. announced a planned \$15m expansion to the Great Lake power scheme to increase water

capacity as a buffer against prolonged dry spells. This was to involve increasing the height of the Miena Dam by almost 6 metres. The Federal Cabinet announced the go-ahead for an \$8.1m Federal Courts centre in Davey Street, Hobart. The State Treasurer announced changes to the land tax system; no land tax would be payable on a person's principal residence regardless of its value. The Devonport Mall was opened. Hobart began increased permanent Saturday morning retail shopping with the opening of the new \$9.7m Centrepoint shopping and car park complex. The H.E.C. released a report which recommended a \$1.36 billion power development scheme involving the Lower Gordon, Franklin and King Rivers to meet the State's electricity needs until the year 2000. The Minister for Education, Mr Holgate, stated that one form of education would be given priority in each of the three regions of Tasmania. These were advanced education in the North, community education in the North-West and university education in the South. State Emergency Service marksmen shot 630 pigs and 52 head of cattle on a Bridgenorth farm as a precaution against the spread of an unknown disease. It was later confirmed that the mystery disease was not foot and mouth disease although its exact identity was not determined. The Minister for Mines, Mr Polley, announced a three-year, \$3m program for re-opening the Beaconsfield gold mine, including dewatering, rehabilitation, drilling and a feasibility study. A new ballot system involving the rotation of names on the ballot papers used for House of Assembly elections became law. (This was the first time in 20 years that a bill introduced by a private member had been passed by Parliament.) The Tertiary Education Commission announced that teacher education courses should be offered by only one education body, either the University of Tasmania or the College of Advanced Education. However, the Commission delayed making a recommendation on which body this should be. Both bodies were called to make further submissions on how they would run the courses if they had sole control.

1980 See Appendix following Chapter 18.

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See also the Index of Special Articles which precedes the General Index at the back of this Year Book for a listing of historical articles included in the various editions of the *Tasmanian Year Book* (entered under 'Historical Articles').

## Chapter 2

### PHYSICAL ENVIRONMENT

#### GENERAL DESCRIPTION

##### Location and Area

The State of Tasmania is a group of islands lying south of the south-east corner of the Australian mainland; the major island is Tasmania and the more important of the lesser islands are King, Flinders and Bruny. Roughly shield shaped with the greatest breadth in the north, the Tasmanian mainland extends from 40° 38' (the official northern boundary of Tasmania is 39° 12') to 43° 39' south latitude and from 144° 36' to 148° 23' east longitude. The coastline is bounded by the Southern Ocean on the south and west and the Tasman Sea on the east, while the approximately 240 kilometres wide Bass Strait separates the island from the Australian mainland. Macquarie Island, a part of the State, is situated at 54° 38' south latitude, 158° 53' east longitude and is bounded by the Southern Ocean.

The area of the whole State, including the lesser islands, is 68 300 square kilometres or about 0.9 per cent of the total area of Australia (7 686 900 square kilometres); it is just under one-third the size of Victoria, the smallest mainland state, and is less than half the size of England and Wales.

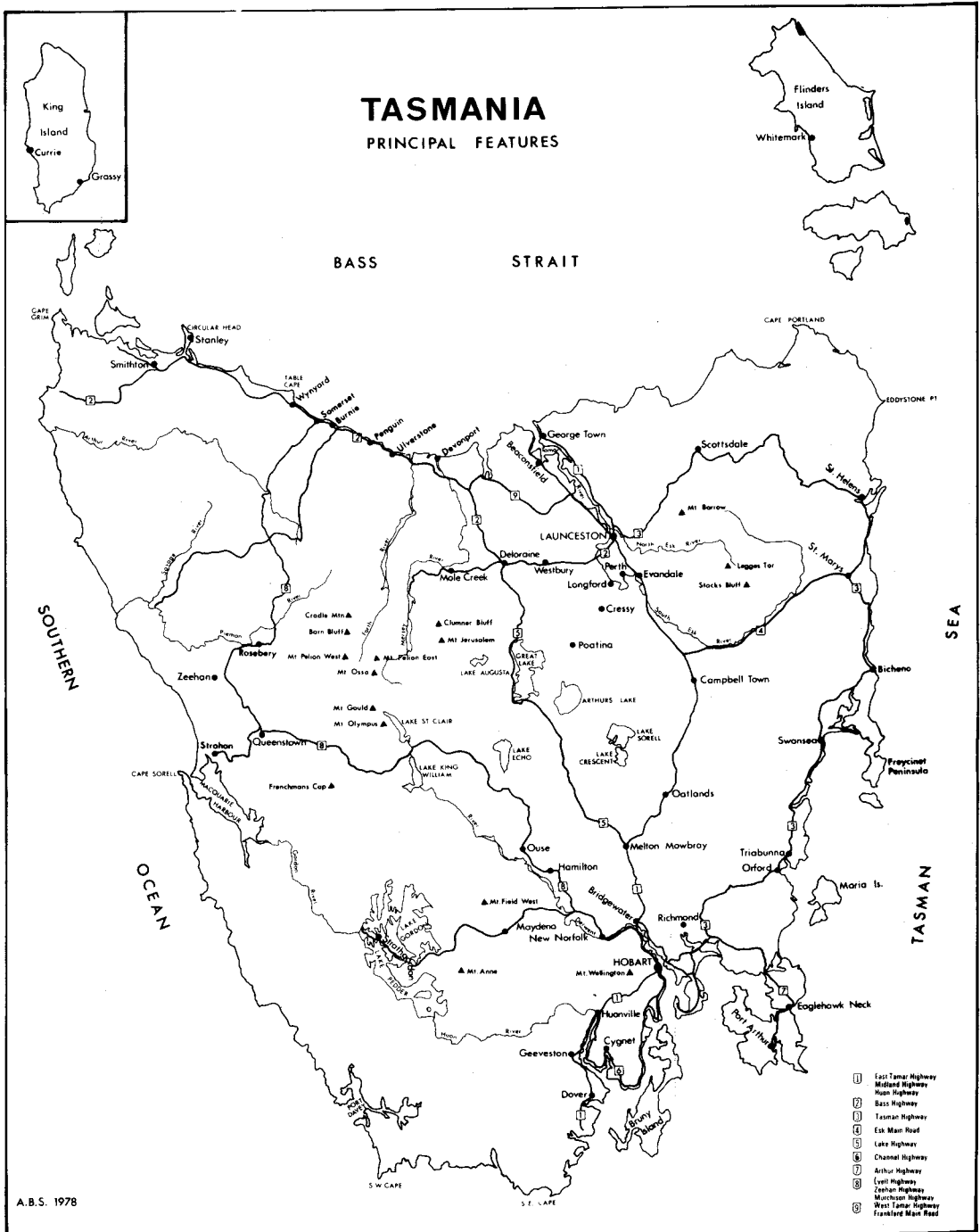
Mainland Australia, extending as it does well north of the Tropic of Capricorn, and with much of its area in the zone of the sub-tropical anti-cyclones, is basically a warm, dry continent. Tasmania is in the temperate zone and practically the whole island is well watered with no marked seasonal concentration; there are no deserts or drought areas as found extensively on the adjacent continent. Being south of latitude 40°, it is on the edge of the wind belt commonly known as the *Roaring Forties* and, with South America the nearest land mass to the west, Tasmania's weather is subject at times to strong winds and heavy rain about the south and west coastal areas. Because Tasmania is the most southern state, there is a tendency to think of it as being close to the Antarctic but its latitude is matched, in the northern hemisphere, by that of Madrid (Spain) and Pittsburgh (U.S.A.). In addition, as Tasmania is an island, it is sheltered from the extremes of heat and cold experienced in these two centres. The effect of its insular position is illustrated by the variation between summer and winter mean temperatures in coastal towns—this rarely exceeds 8° Celsius. Comparing Hobart (Tasmania) with Melbourne (Victoria), mean maxima are some 3°C warmer and mean minima 1.5°C warmer in the Victorian capital.

Apart from the Great Dividing Range in the east, continental Australia is predominantly a land of low plateaux and plains with little relief. By way of contrast, Tasmania could legitimately be called the island of mountains, since it has the largest proportion of high country to its total area, compared with the other states. The distinctive feature of the island is not so much the height of the mountains—few exceed 1 500 metres—but rather the frequency with which they occur. The *Australian Pilot*, Vol. II describes Tasmania as 'probably the most thoroughly mountainous island on the globe'.

##### Population Distribution

With a population of only 420 100 (at 31 December 1979), Tasmania is still thinly populated although its population density of only six persons per square kilometre is exceeded only by Victoria and New South Wales among the Australian states. By comparison, the population density of England and Wales at 30 June 1978 was 325 persons per square kilometre (area 151 207 square kilometres; population 49.1 million). To have this population density, Tasmania (area 68 300 square kilometres) would require a population of 22.2 million.





A marked characteristic of the mainland states of Australia is the very high concentration of population in their respective metropolitan areas, Brisbane providing the only example where this concentration falls below 50 per cent of the State's total population. In contrast, the Tasmanian population is concentrated in three main areas: (i) the Hobart Statistical Division with about 40 per cent; (ii) the Launceston Statistical District with about 20 per cent; and (iii) the North Western Statistical Sub-division with a further 22 per cent. Only 75 per cent of Tasmania's population live in urban centres (localities with 1 000 or more persons); all other states are in the range from 80 to 90 per cent. This deviation from an Australian pattern is partly explained by the relative proximity of Launceston and the North-West Coast to the principal mainland markets. However, terrain and climate have also had a large influence on the distribution of the State's population.

### Principal Physical Features, Tasmania

The following table lists the principal mountains, lakes and rivers of Tasmania (for their location see the previous map):

#### Principal Physical Features

Mountains			
Name	Height (metres)	Name	Height (metres)
Mt Ossa .....	1 617	Mt Gould .....	1 491
Legges Tor .....	1 573	Mt Jerusalem .....	1 491
Barn Bluff .....	1 458	Olympus .....	1 447
Mt Pelion West .....	1 554	Frenchmans Cap .....	1 443
Cradle Mountain .....	1 545	Mt Ironstone .....	1 443
Stacks Bluff .....	1 527		
Lakes			
Name	Area (square kilometres)	Name	Area (square kilometres)
Lake Gordon (a) .....	272	Lake Sorell .....	52
Lake Pedder (b) .....	241	Lake King William (a) .....	41
Great Lake (c) .....	158	Lake Echo (c) .....	41
Arthurs Lake (c) .....	64	Lake St Clair .....	28
Rivers			
Name	Length (kilometres)	Name	Length (kilometres)
South Esk (d) .....	201	Huon .....	170
Gordon .....	185	Mersey .....	146
Derwent .....	182	Arthur .....	113

(a) Man-made.

(b) Man-made—inundated the much smaller natural Lake Pedder.

(c) Natural lake enlarged by dam(s).

(d) From source to confluence with North Esk; at this point the river becomes known as the Tamar. If the Tamar is included in the length of the South Esk a further 70 km is added to its length.

## PHYSIOGRAPHY

### Introduction

Tasmania is an island of mountains and is unique among Australian states in being predominantly influenced by polar maritime air masses. From the point of view of settlement and development, these two factors have combined to create assets against which must be weighed certain liabilities. The island, a mere 296 kilometres from north to south and 315 kilometres from east to west, has a wide variety of mountains, plateaux and plains, of rivers lakes and tarns, of forest, moorland and grassland, of towns, farms and uninhabited (and virtually unexplored) country. The temperate maritime climate partly explains Tasmania

being called the most English of all states but other factors operate to heighten the comparison—the pattern of agricultural settlement with orchards, hedges and hopfields; the lake country; the early freestone architecture still common in the east; and the roads and villages dotted with oaks, elms and poplars. Nature and the early settlers have provided the assets for a flourishing tourist industry which is currently being vigorously developed. Assured rainfall and mountain storages have also given birth to massive development of hydro-electric power and, indirectly, to industry. The growth of forests, too, is promoted by suitable rainfall and temperature, and this forms the basis for industries such as timber-milling, newsprint and other paper production and wood-chipping.

The mountainous nature of the island is confirmed by surveys, which shows six features exceeding 1 500 metres, 28 exceeding 1 220 metres and with a substantial part of the Central Plateau above 900 metres. The highest mountain is Mt Ossa (1 617 metres) some 16 kilometres north-west of Lake St Clair, and north-west again from this peak lie Mt Pelion West (1 554 metres), Barn Bluff (1 559 metres) and Cradle Mountain (1 545 metres); the furthest distance, 24 kilometres, is from Mt Ossa to Cradle Mountain. In the Ben Lomond area, the principal features are Legges Tor (1 573 metres) and about 10 kilometres south, Stacks Bluff (1 527 metres). Each of these mountainous regions and a number of others have been set aside as national parks, two of which, Ben Lomond and Mt Field, are renowned for winter sport.

### Water Resources and Rainfall

Fresh-water navigation has played very little part in Tasmania's development, the rivers being too fast-running, shallow or short. Of the four major ports, three are located on tidal estuaries—Hobart on the Derwent; Launceston on the Tamar and Devonport on the Mersey (Burnie has built a port on the open sea, protected by breakwaters). Rivers, however, are significant for three reasons: (i) use of headwaters for electricity generation; (ii) domestic and industrial water supply; and (iii) irrigation. Hobart, for example, draws much of its water supply direct from the upper River Derwent without use of a dam and the river flow is adequate to service a population at least 10 times greater than that at present. The development of hydro-electric power has been based on full utilisation of the sources and tributaries of the Derwent with a chain of power houses stretching from Clark Dam on Lake King William to Meadowbank only 51 kilometres from Hobart. The naturally southward draining Great Lake waters are diverted northwards through the Poatina power station and discharged into the South Esk River system. The waters of the South Esk have been further harnessed at Trevallyn. In the north-west, the Mersey-Forth scheme exploits the Fisher, Mersey, Wilmot and Forth Rivers in a development spread over approximately 2 070 square kilometres. Stage I of the Gordon River power development scheme in the south-west was completed in 1978, creating the largest fresh-water storage in Australia. This does not exhaust the possibility of future hydro-electric development, as construction work on the Pieman River system has commenced with completion scheduled for 1986, and the Lower Gordon, Franklin and King Rivers also have substantial potential for power development.

To obtain a true perspective, it should be appreciated that large areas of the State cannot be cultivated because there is too much rainfall (in contrast with the mainland of Australia where often the reverse situation applies). Further, the mountainous terrain and accompanying highland climate have restricted farming to relatively small areas of suitable country, mainly river valleys, coastal plains and the lower plateaux. In 1979, farm statistics showed that 33 per cent of the State's area was occupied by rural holdings. Only 3.6 per cent of the area of rural holdings was under crop and a further 40.5 per cent under sown pasture. The remaining 55.9 per cent of rural holdings included bush runs, uncleared scrub or possibly land unsuitable for any rural purpose at all. A high proportion of the State's area not included in rural holdings is composed of forests, national parks and lakes.

### Physiographic Regions

To explain the pattern of settlement, it is necessary to isolate the various physiographic regions of the State as follows:

*Central Plateau:* The main feature is a relatively undissected, dolerite-capped plateau sloping generally south-eastward from an average level of 1 065 metres in the north to 610 metres in the south, and drained almost wholly by the Derwent system. The northern and

eastern boundaries of the Plateau are the Great Western Tiers (paradoxically named since they lie in the central north of the island). This is known as the 'lake country' of the island and is the chief source of hydro-electric power.

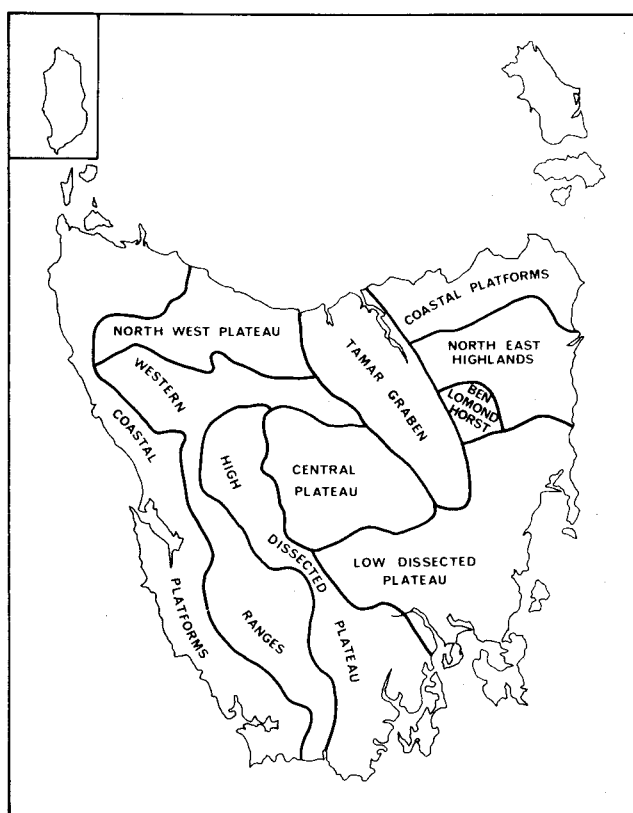
**High Dissected Plateau:** West of Lake St Clair, dolerite caps steeply-tilted sediments and the plateau is much dissected; it comprises a series of peaks and broken ridges. The coastlands in the extreme south of the region are rugged but in the D'Entrecasteaux Channel and Huon River areas, narrow coastal belts have been devoted to specialised agriculture.

**Western Ranges:** The high dissected plateau is bounded by a mountainous series of ranges running parallel to the west coast and in this region are located the State's principal mines. The south of the region is virtually uninhabited except for Strathgordon.

**Western Coastal Platforms:** Throughout almost the entire length of the west coast, an uplifted and much dissected peneplain slopes westward from about 275 metres altitude, ending abruptly in cliffs more than 30 metres high. In the south of this region, superhumid button grass plains predominate, and the area is uninhabited. On the coastal plain south of the Arthur River, however, dairy cattle are wintered on agistment runs, while north of the river dairying begins to appear and swamps formed by recent emergence have been cleared for farming.

**North-West Plateau:** North of the Western Ranges lies a plateau averaging nearly 610 metres altitude and important mainly for forestry; the coastlands derive mainly from basalt, giving rise to intensive mixed farming based on dairying, potatoes and crops for canning and freezing, such as peas and beans.

#### Tasmania Physiographic Regions



*The above regions derive from a classification by J. L. Davies, M.A., PhD., University of Tasmania.*

**Tamar Graben:** This graben (rift valley) is the largest plain and the leading agricultural and pastoral district in the State; it ends in the drowned inlets of the Tamar and Mersey estuaries and of Port Sorell, in the north.

**North-East Coastal Platforms:** This region consists of undulating lowland but the soils are acidic and the land is used only for grazing.

**North-East Highlands and Ben Lomond Horst:** This region comprises mostly uplifted remnants of old fold mountains dominated by the 1 525 metre dolerite-capped plateau horst of Ben Lomond, an outlier of the Central Plateau. Here agriculture is largely confined to small basalt-derived basins. Some minerals are worked.

**Low Dissected Plateau:** In the south-east lies a low dissected dolerite plateau averaging perhaps 365 metres and used mainly for grazing. The northern coastlands of this region are narrow and also devoted to sheep, but the southern coastland is important for its specialised agriculture. At the extreme south of the region is the drowned estuary of the Derwent and the Tasman and Forestier Peninsulas.

## DESCRIPTION OF STATISTICAL DIVISIONS

### Introduction

Earlier in this chapter the State of Tasmania was briefly described by analysing its terrain in terms of physiographic regions. For statistical purposes, the State is also analysed in divisions but these do not necessarily coincide with physiographic regions, one reason being that the former are basically groupings of whole municipalities. The traditional Tasmanian statistical divisions, in use for over 50 years, were exposed to searching scrutiny in 1971 and the decision was taken to introduce a new structure, to be applied to statistics in respect of periods commencing on or after 1 July 1972.

### History of Statistical Divisions

The grouping of administrative areas into divisions for statistical purposes can be found in annual volumes of the *Statistics of Tasmania* dating back to the nineteenth century. The administrative areas included: police districts; registration districts; electoral districts; and municipalities. The boundaries of these areas were subject to periodic changes. The *Local Government Act* 1906 provided a basis for the whole State coming under uniformly constituted local government and gradually the divisional grouping of administrative areas was confined, in official statistics, to municipalities. As a result of this Act, fixed local government area (municipality) boundaries were delineated in 1907 by a commission specially set up for the purpose. The new boundaries have remained broadly unchanged since 1907 although there have been numerous relatively minor boundary changes. One exception is that the old municipalities of 'Hobart', 'Queenborough' and 'New Town' were combined to form the new municipality of 'Hobart' in 1919. The names of several municipalities have also been changed since 1907. Small area statistics relating to 1907 and earlier years are not generally comparable with later statistics produced by the Bureau due to the boundary changes in 1907.

In 1919, groupings of local government areas used were very similar to those still used in 1971; in some series Hobart, Launceston and Glenorchy were separately specified as components of an 'Urban Division' distinct from the region in which each was located.

The basis for these 1919 groupings can only be inferred since no specific criteria were specified in the records. The Western Division clearly combined the 'west coast' mining municipalities into one entity; the Southern Division seemed to be based on orcharding, small fruit and hop areas; while the South Eastern Division was allied more with pastoral and grazing areas. In short, the main determinant may well have been similarity of rural activity (with the Western Division a special case because of its mining activity).

After the 1966 population census, a new division was formed with the title Hobart Division, comparable with similar capital city divisions in other states; its boundaries were drawn wide enough to encompass the expected expansion of the inner urban area for a period of 20 to 30 years. Apart from this, the broad divisional structure in 1971 was very much the same as it had been in 1919.

In 1972 a new statistical division structure, using the three principal urban centres of influence as a basis, was designed. The three urban centres and their areas of influence were: (i) Hobart—South and South-East; (ii) Launceston—North and North-East; and (iii) Burnie—

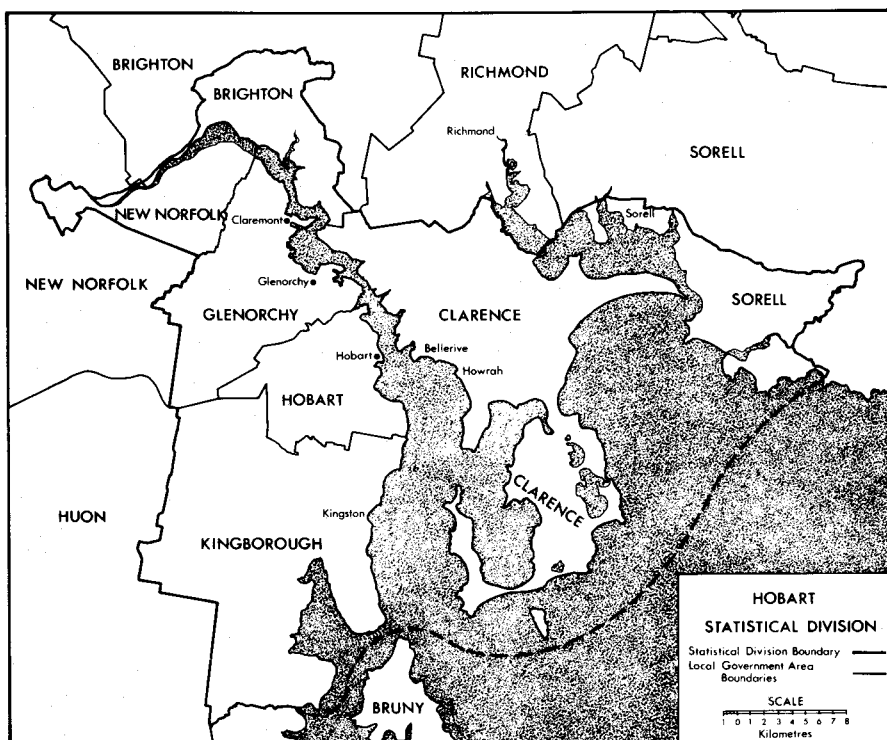
Devonport—North-West and West. The following divisional structure was then adopted: (i) with Hobart as focus—Hobart and Southern Divisions; (ii) with Launceston as focus—Northern Division split into Tamar and North Eastern Subdivisions; and (iii) with Burnie-Devonport as focus—Mersey-Lyell Division split into North Western and Western Sub-divisions.

### Outline of the Present Structure

The divisions in the new structure are as follows:

#### *Hobart Division*

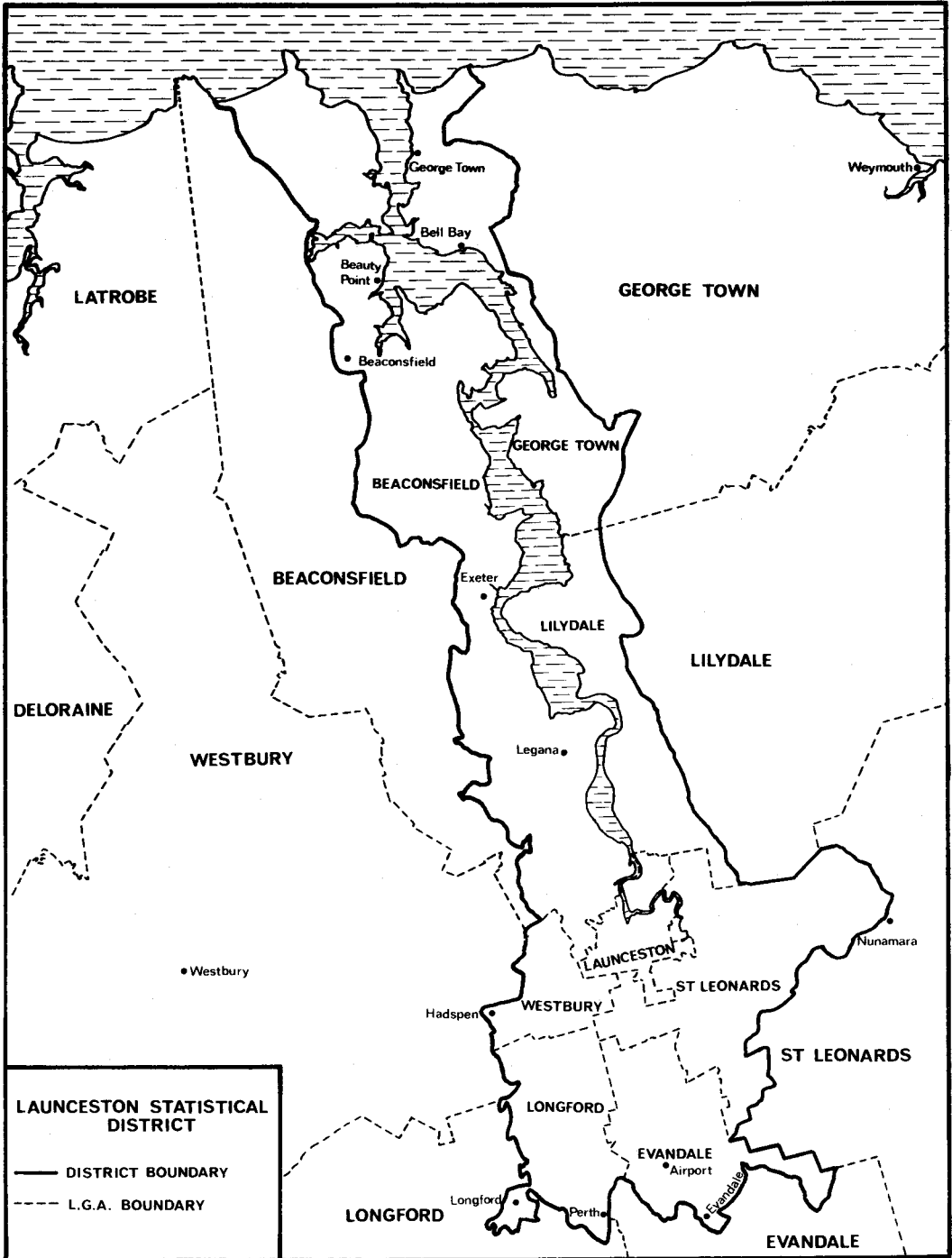
This Division comprises Hobart and Glenorchy Cities, the municipality of Clarence, and parts of four other municipalities: Brighton; Kingborough; New Norfolk; and Sorell. The Division is Tasmania's principal industrial region and the administrative focal point. The Hobart Division boundaries were drawn wide enough to contain the expected outward growth of the inner urban area for a period of 20 to 30 years.

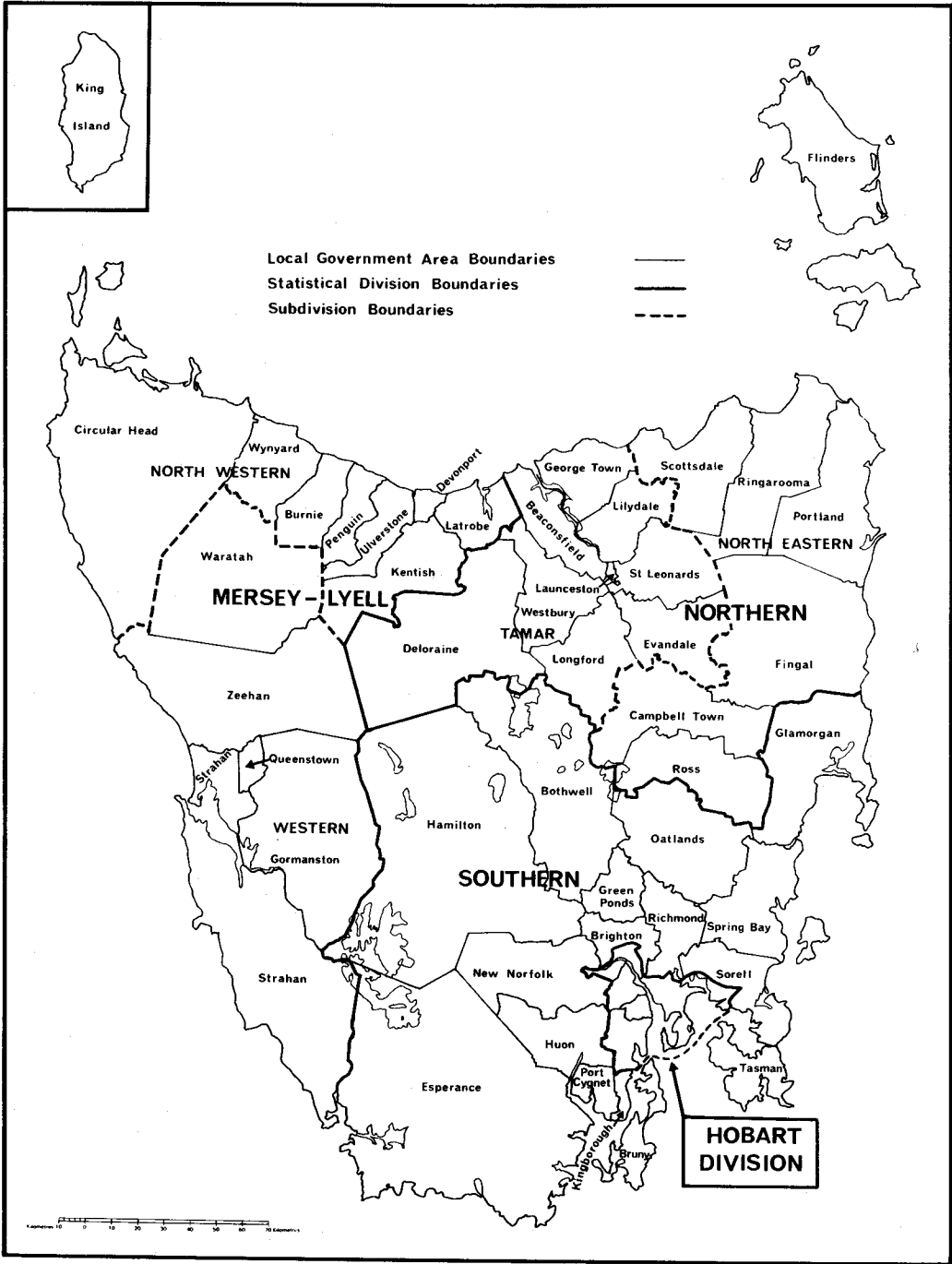


One important component of the Hobart Division is Urban Hobart, defined as the densely settled contiguous parts of the cities of Hobart and Glenorchy, and of the municipalities of Clarence and Kingborough. The boundaries of Urban Hobart and of the Hobart Division do not conform with borders defining local government areas. (The details of these boundaries are given in Chapter 6 'Demography' under 'Populations Centred on Hobart and Launceston'.)

#### *Southern Division*

Comprises the southern local government authority areas which have Hobart as their urban focus. Predominant activities include orcharding, sheep and cattle grazing, forestry and timber processing.







### Northern Division

The Northern Division is the region with Launceston as its urban focus.

(i) *Tamar Sub-division*: This is the region dominated by the Tamar Valley. In the centre of this area is Launceston and its suburbs (known as Urban Launceston). This Sub-division includes several major manufacturing industries, port facilities of the northern region and agricultural, pastoral, dairying and forestry industries.

*Launceston Statistical District*: A new boundary delineating the Launceston Statistical District was drawn for the purpose of presenting results of the 1976 Population Census. The boundary was drawn to contain the area of expected urban growth over the next two decades and includes the City of Launceston and parts of seven other municipalities.

*Urban Launceston* is defined for statistical purposes as the City of Launceston plus the contiguous urban parts of the following municipalities: Lilydale, St Leonards, Evandale, Westbury and Beaconsfield.

(ii) *North Eastern Sub-division*: Comprises the outer seven municipalities of the Northern Division. Principal activities include agriculture, dairying, sheep and cattle grazing, forestry and some mining.

### Mersey-Lyell Division

This division encompasses the north-west and western portions of the State. The region has a twin urban focus of Burnie-Devonport.

(i) *North Western Sub-division*: Comprises the municipalities stretching along Bass Strait from Latrobe to Circular Head plus Kentish and King Island. The Sub-division includes several major manufacturing industries and is a principal agricultural, pastoral, dairying and forestry area for the State.

(ii) *Western Sub-division*: Contains Tasmania's western municipalities where mining activities predominate.

The accompanying maps show: (i) Statistical division and sub-division boundaries; (ii) local government authority components of statistical divisions; and (iii) the boundary of the Launceston Statistical District.

## ADMINISTRATION AND AREA OF STATE

### Sovereignty

On 17 December 1975, the High Court of Australia announced its decision on an action by the six states challenging the validity of the federal *Seas and Submerged Lands Act*. This Act gives the Federal Government sovereignty over the Australian territorial sea, air space, sea-bed and subsoil; and over the continental shelf beyond the limits of the territorial sea. In their action, the state governments claimed that the sovereign powers given the states over their land mass included sovereignty over the territorial sea adjacent to their coastlines for a distance of at least 3 miles (4.8 km). The full bench of the High Court dismissed the action by the states and upheld the validity of the *Seas and Submerged Lands Act*. Prior to this decision, Tasmania had claimed sovereignty (including mining and fisheries jurisdiction) over an area bound by the approximate rectangle 39° 12' to 45° south latitude and 140° to 150° east longitude.

Since the boundary line between Tasmanian and Victorian sovereignty is defined as 39° 12' south latitude, numerous Bass Strait Islands, the chief being the Furneaux group, King Island and the Fleurieu, Hogan, Curtis and Kent groups, are part of Tasmania. In effect some Tasmanian territory (Rodondo and West Moncoeur Islands) is located only 13 to 16 kilometres from the Victorian coast.

Macquarie Island, site of an Antarctic research station, is also part of the State of Tasmania and is situated in 54° 38' south latitude, 158° 53' east longitude; its area is included in Esperance, a State coastal municipality.

### Area of Major and Minor Islands

The official area of the State of Tasmania including many smaller islands (based on a 1963 survey) is 68 331 square kilometres (6 833 100 hectares). The next table shows the area of the main islands and the municipalities to which they belong:

## Area of Islands

Island	Area (square kilometres)	Municipality
Bruny .....	362	Bruny (a)
King .....	1 099	King Island (a)
Flinders .....	1 374	
Prime Seal .....	10	
Badger .....	10	
Vansittart .....	6	Flinders (a)
Cape Barren .....	445	
Clarke .....	113	
Three Hummock .....	70	
Hunter .....	74	
Robbins .....	101	Circular Head
Maria .....	101	
Schouten .....	34	Spring Bay
Macquarie .....	123	Glamorgan
		Esperance
Total islands .....	3 922	
Mainland Tasmania .....	64 409	
Total Tasmania .....	68 331	

(a) Island municipality.

## Area of Municipalities and Cities

In the table that follows, the measured areas of local government areas have been rounded to the nearest 10 square kilometres and the area of Tasmania has been rounded to the nearest 100 square kilometres as the accuracy of more detailed measurement is difficult to determine. Where municipal boundaries lie in the sea or an estuary these legal limits have been disregarded so that the stated area relates to a physical boundary (i.e. the coastline). However, the areas shown include all smaller islands which form part of the State.

Area of Statistical Divisions, Sub-divisions and Local Government Areas  
(Square Kilometres)

Local government area (statistical division and sub-division in bold type)	Area	Local government area (statistical division and sub-division in bold type)	Area
Hobart (H) .....	80	Campbell Town .....	1 440
Glenorchy (H) .....	120	Fingal .....	2 730
Clarence (H) .....	250	Flinders .....	1 990
Brighton (H) (S) .....	440	Portland .....	1 580
Kingborough (H) (S) .....	350	Ringarooma .....	1 630
New Norfolk (H) (S) .....	1 320	Ross .....	1 240
Sorell (H) (S) .....	780	Scottsdale .....	1 290
Bothwell (S) .....	2 610	North Eastern .....	11 900
Bruny (S) .....	360		
Esperance (S) .....	6 190	NORTHERN .....	20 610
Glamorgan (S) .....	1 540		
Green Ponds (S) .....	420	Burnie .....	620
Hamilton (S) .....	5 850	Circular Head .....	4 920
Huon (S) .....	770	Devonport .....	120
Oatlands (S) .....	1 540	Kentish .....	1 190
Port Cygnet (S) .....	240	King Island .....	1 100
Richmond (S) .....	570	Latrobe .....	550
Spring Bay (S) .....	1 120	Penguin .....	430
Tasman (S) .....	480	Ulverstone .....	510
		Wynyard .....	810
HOBART .....	940	North Western .....	10 240
SOUTHERN .....	24 090		
Launceston .....	28	Gormanston .....	2 870
Beaconsfield .....	640	Queenstown .....	140
Deloraine .....	2 920	Strahan .....	3 730
Evandale .....	990	Waratah .....	2 710
George Town .....	650	Zeehan .....	3 000
Lilydale .....	680	Western .....	12 460
Longford .....	1 000		
St Leonards .....	890	MERSEY-LYELL .....	22 700
Westbury .....	900		
Tamar .....	8 700	TASMANIA .....	68 300

At the 1966 Population Census, new definitions based on high population density were employed to fix the boundaries of urban areas. The two major centres in the State at the 1971 Population Census, with boundaries conforming to the definitions, were: (i) Urban Hobart (approximately 112 square kilometres); and (ii) Urban Launceston (approximately 74 square kilometres). (See Chapter 6 for definitions of these areas.)

## LAND TENURE

### Introduction

The area of Tasmania is 68 300 square kilometres, all of which had been proclaimed as Crown property when the first settlers arrived in 1803. In the period since their landing 36.5 per cent of the State's total area has been alienated by grant or sale; the Crown still owns 62.1 per cent and the residual 1.4 per cent is in the process of alienation (i.e. being purchased from the Crown by instalment payments).

### Crown Lands

The following table classifies the area of the State by ownership (i.e. alienated or Crown). (For details of land alienation from 1820 see the 1977 and earlier Year Books.) Crown forestry reservations, apart from one component, is land used or to be used exclusively for forestry purposes; the exception is the forested area of recreation and conservation reservations. The forestry reservations account for 32.5 per cent of the State's area.

Alienation and Occupation of Crown Lands, Tasmania at 30 June  
(<sup>000 Hectares</sup>)

Classification of land	Area				
	1975	1976	1977	1978	1979
Alienated (aggregate) (a) .....	2 755	2 751	2 743	2 517	2 494
In process of alienation (a) .....	159	154	146	120	96
Crown lands—					
Leased or licensed—					
Through Lands Department (a)—					
Pastoral .....	173	170	105	102	83
Other (b) .....	12	12	9	8	9
Through Mines Department (c) .....	38	47	49	55	56
Total .....	223	229	163	165	148
Forestry reservations (d)—					
State forests .....	1 372	1 474	1 475	1 494	1 518
Other (e) .....	668	567	704	702	702
Total .....	2 040	2 040	2 179	2 196	2 220
Other Crown land (a) .....	1 653	1 656	1 599	1 832	1 872
Total area of State .....	6 830	6 830	6 830	6 830	6 830

(a) Estimates only.

(b) For closer settlement and soldier settlement, and short-term.

(c) Includes a small area of private land leased through the Mines Department.

(d) Includes areas under pulpwood concessions and exclusive forest permits; see Chapter 8 for further details.

(e) Includes estimated forested component of State reserves.

Although the possibility of rapidly alienating more Crown land for farming purposes on any large scale may seem remote, it should be noted that a large proportion of Crown land is nevertheless of importance to the State's economy, specifically for forestry and tourism purposes.

### National Parks and Wildlife Service

The *National Parks and Wildlife Act* 1970 repealed the *Animals and Birds Protection Act* 1928 and the *Scenery Preservation Act* 1915 and placed the management and control of parks, reserves, fauna and flora in the hands of a single authority, the National Parks and Wildlife Service. This authority has wide-ranging powers covering the management of parks, protection of fauna and flora, regulation of hunting, protection of Aboriginal relics and enforcement of regulations under the Act. It is responsible for the administration of State reserves, game reserves, conservation areas, national parks, nature reserves, Aboriginal sites and historic sites. Conservation areas are usually set aside for the protection of flora and fauna. Game reserves are a new category of reserve where controlled hunting is permitted but habitat and other wildlife are protected.

#### State Reserves

The following gives a brief description of the principal State reserves:

**Asbestos Range National Park:** Easily accessible from Launceston and Devonport, this park caters for family recreation. The park extends along the north coast from Port Sorell to Greens Beach at the mouth of the Tamar. The vegetation includes eucalypt forests and coastal heathlands, as well as grassed areas which provide good grazing for many native animals including the reintroduced forester kangaroo.

**Ben Lomond National Park:** Is located 45 kilometres south-east of Launceston. This high plateau area includes Legges Tor and is Tasmania's principal skiing area.

**Cradle Mountain-Lake St Clair National Park:** This is an area of rugged mountain scenery; it contains Tasmania's highest mountain (Mt Ossa) together with a number of major peaks, numerous lakes, deep gorges and several waterfalls. Flora and fauna in the park are representative of Tasmania's montane species and are in a largely untouched condition. The weather of the area is unpredictable and at times extremely severe—blizzards are common and may occur in mid-summer. The principal walking track extends from Cradle Valley (in the north) to Lake St Clair, a distance of 85 kilometres.

**Frenchmans Cap National Park:** The park boundary is three kilometres from the Lyell Highway and about midway between Queenstown and Derwent Bridge. Access to the park is by foot. It is an area of rugged glaciated landscape and is an ideal wilderness area for experienced bushwalkers. Frenchmans Cap, an enormous white quartzite peak with a 300-metre face on the eastern side, is the principal feature of the park.

**Freycinet National Park:** This park, situated on the east coast, occupies the whole of Freycinet Peninsula together with Schouten Island and other offshore islands. A principal feature of the park is the 300 metres high red granite Hazards. The park provides pleasant walking throughout the year, although during summer water may be scarce.

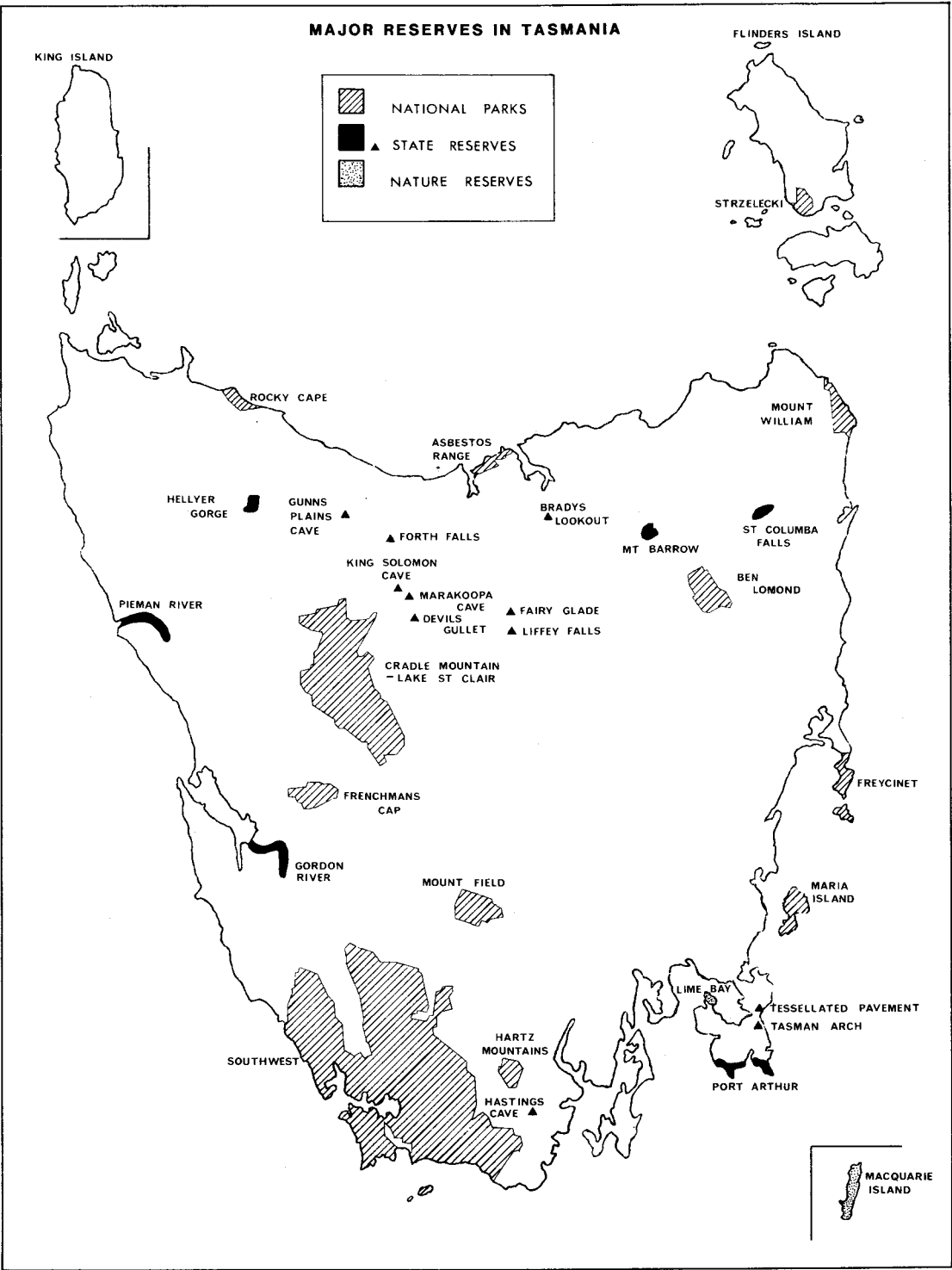
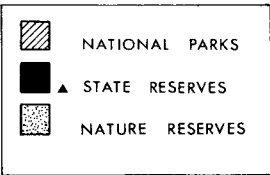
**Hartz Mountains National Park:** Is located south-west of Geeveston. The main features of the park are Hartz Mountain, 1 253 metres high, several small picturesque lakes, and the superb eastward view from Waratah Lookout. The park includes a small sample of wet sclerophyll forest.

**Maria Island National Park:** Is situated off the east coast from Orford and may be reached by chartered boat or aeroplane. The *Maria Van Diemen* provides a daily passenger service to the island from Triabunna all year round. Principal attractions include convict ruins from two penal settlements, the main one being at Darlington on the north-west corner of the island. Forester kangaroo, Bennetts wallaby and other Tasmanian fauna have been established on the island and emu have been introduced. At the north-east corner of the island high fossil cliffs rise abruptly from the sea.

**Mount Field National Park:** This park, near Maydena and only 75 kilometres from Hobart, is the only southern ski resort in Tasmania and includes spectacular mountain scenery. Principal peaks are Mt Field East and West; other features include Russell Falls, Lake Dobson and numerous glacial lakes and tarns.

**Mt William National Park:** Bounded on the east by long white sandy beaches of the north-east coast, this park contains the largest single sample of coastal, dry, sclerophyll forest found in any reserve. It also contains 11 of the 14 different heath communities of north eastern Tasmania, and over half the native species of Tasmanian vertebrate animals.

MAJOR RESERVES IN TASMANIA



**Port Arthur and Tasman Peninsula:** This historic and scenic area is the best known and most visited tourist attraction in Tasmania. The area, in addition to the historic convict ruins of the Port Arthur penal settlement, contains many small reserves of either historic or scenic significance. Port Arthur, site of a convict settlement from 1830 to 1877, has a number of historic ruins. Unfortunately many of the buildings are in an extreme state of disrepair; however, some restoration work has been undertaken and a draft management plan for the site is under preparation. Other historic sites include the old convict coal mines at Plunkett Point and Eaglehawk Neck where guards were stationed and a line of dogs tethered to prevent escape from the Peninsula. This area is also renowned for its spectacular coastal landforms, e.g. the Blowhole, Devils Kitchen, Tasman Arch and the Tessellated Pavement.

**Southwest National Park:** Is Tasmania's largest State reserve and covers 403 240 hectares of Tasmania's rugged south-west. It is a true wilderness area and encompasses the Western and Eastern Arthur Ranges, Federation Peak, Frankland Range, Mt Anne, Precipitous Bluff, Lake Pedder, part of the rugged south coast including Port Davey and Bathurst Harbour, and adjacent offshore islands. Dense scrub, which covers much of the area, frequent harsh weather and a scarcity of cleared tracks make this area the domain of the experienced, self-contained bushwalker.

#### State Reserves, Conservation Areas, and Game Reserves

The following table lists the Tasmanian national parks, State reserves, historic sites, Aboriginal sites, nature reserves, game reserves and conservation areas. At 30 June 1980 the total area of State and game reserves was 684 838 hectares, while that of conservation areas was 347 270 hectares.

**National Parks, State Reserves, etc. at 30 June, 1980**

Name	Area (ha)	Location	Description
<b>NATIONAL PARKS</b>			
Asbestos Range	4 281	North coast	Coastal heathland
Ben Lomond	16 526	Central north	Mountainous
Cradle Mountain—Lake St Clair	126 205	Central	Mountainous, lake
Frenchmans Cap	13 000	West	Mountainous, scenic
Freycinet	10 010	East coast	Coastal, red granite
Hartz Mountains	6 470	South	Mountainous, scenic
Maria Island	9 672	East	Wildlife, convict station
Mount Field	16 257	Central south	Mountainous, scenic
Mount William	10 595	North east	Forester kangaroo, coastal
Rocky Cape	3 050	North west	Coastal heath, banksia
Southwest	403 240	South west	Rugged wilderness
Strzelcki	4 215	Flinders Island	Mountainous, coastal
<b>STATE RESERVES</b>			
Alum Cliffs	1 540	Mole Creek	Scenic gorge and cliffs
Baldock Cave	43	Mole Creek	Caves, sclerophyll forest
Bradys Lookout	1	West Tamar	River, scenic
Brown Mountain—Remarkable Cave	61	Tasman Pen.	Coastal, scenic
Cape Pillar	3 200	Tasman Pen.	Coastal, sclerophyll forest
Cape Raoul	2 066	Tasman Pen.	Coastal, heath
Corra Linn	1	East Launceston	Scenic
Croesus Cave	47	Central	Caves
Derwent Cliffs	5	New Norfolk	Scenic
Devils Gullet	146	North	Scenic gorge
Eaglehawk Neck—Taranna	25	Tasman Pen.	Coastal, scenic
Euganana	1	North west	Stratified cave deposit
Exit Cave	441	South	Large cave, glow worms
Fairy Glade	39	Central north	Scenic, fern glade
Ferndene	35	North	Scenic, fern glade
Fluted Cape	259	Bruny Island	Coastal, sclerophyll forest
Forth Falls	55	North central	Waterfall
Gordon River	4 822	West	Scenic river
Gunns Plains Cave	10	North west	Caves
Hastings Caves	61	South	Caves, geology
Hellyer Gorge	569	North west	Scenic, rainforest
Henty Glacial Moraine	1	West	Geology
Holwell Gorge	121	Central north	Scenic gorge
Junee Cave	20	Central north	Cave
King Solomon Cave	230	Central north	Caves
Labillardiere	2 332	Bruny Island	Coastal, dry sclerophyll forest
Liffey Falls	101	North central	Scenic waterfall
Lookout Rock	2	East coast	Coastal, scenic
Lyell Highway	7 284	West central	Scenic, rainforest

## National Parks, State Reserves, etc. at 30 June, 1980—continued

Name	Area (ha)	Location	Description
STATE RESERVES—continued			
Marakoopa Cave	71	North central	Caves, geology
Marriotts Falls	121	South central	Waterfall
Mount Arthur	4	Tasman Pen.	Scenic lookout
Mount Barrow	459	North east	Mountain
Mount Barrow Falls	81	North east	Waterfall
Mount Montgomery	299	North west	Scenic
Murchison Highway	452	West	Scenic road, rain forest
Notley Gorge	11	North	Scenic fern gully
Palmer's Hill Lookout	1	Tasman Pen.	Scenic
Pegarah Forest	37	King Island	Relict eucalypt forest
Pieman River	3 328	West coast	Scenic river
Port Davey	17	South west	Scenic foreshore, coast
Roger River	174	North west	Scenic, rainforest
St Columba Falls	314	North west	Waterfall
St Marys Pass	273	North east	Scenic road
St Patricks Head	150	North east	Scenic
Steppes	48	Central	Homestead, flora
Stewarts Bay	78	Tasman Pen.	Scenic foreshore
Tasman Arch	138	Tasman Pen.	Scenic, geology
Tessellated Pavement	4	Tasman Pen.	Scenic, geology
Thermal Springs	1	Central north	Geology
Trowatta Caves	66	North west	Caves, limestone arch
Waterfall Creek	24	Bruny Island	Scenic, forest
Zeehan—Renison Bell	110	West	Scenic road
HISTORIC SITES			
Batchelors Grave	Small	Taroona	Historic grave
Bluff Battery	3	Bellerive	Historic fort
Bowens Landing	3	Risdon Cove	Site of first settlement
Callington Mill	Small	Oatlands	Historic mill
Coal Mines	214	Tasman Pen.	Convict mine
161 Davey Street	Small	Hobart	Historic home
D'Entrecasteaux Monument	Small	South	Historic monument
D'Entrecasteaux Watering Place	1	South	Site of early landing
Entally House	37	Central north	Historic home
George III Monument	10	South	Memorial to shipwreck, flora
Isle of the Dead	2	Tasman Pen.	Historic Graveyard
Lyons Cottage	Small	Stanley	Historic cottage
Point Puer—Crescent Bay	53	Tasman Pen.	Historic, scenic coast
Port Arthur	113	Tasman Pen.	Convict ruins
Richmond Gaol	1	Richmond	Convict gaol
Ritchies Mill	Small	Launceston	Flour water mill
Sarah Island	6	Macquarie Harbour	Site of convict station
Shot Tower	3	Taroona	Historic tower
Sydney Cove	53	Furneaux	Historic shipwreck
Tasman Monument	Small	Tasman Pen.	Historic monument
Toll House	Small	New Norfolk	Historic building
Waubedebars Grave	Small	Bicheno	Aboriginal grave
Womens Prison	Small	Hobart	Historic prison
Wybalenna	126	Flinders Is.	Aboriginal station
York Town	2	North Tamar	Site of early settlement
NATURE RESERVES			
Bass Pyramid	Small	Bass Strait	Seal breeding
Chappell Islands	1 350	Furneaux	Bird islands
Curtis Island	149	Bass Strait	Ecological reference
Diamond Island	5	East coast	Penguin rookery
Dismal Swamp	100	North west	Blackwood forest
East Risdon	44	Hobart, east	Rare eucalypts
Foster Islands	48	North east	Bird islands
George Rocks	5	North east	Bird islands
Green Island	5	D'Entrecasteaux Channel	Ecological reference
Green Point	22	South east	Research
Hippolyte Rocks	5	South east	Seal breeding
Hospital Creek	22	South east	Rare endemic plant
Ile des Phoques	7	East coast	Seal breeding
Isabella Island	25	Flinders	Cape Barren Goose breeding
Judgment Rocks	Small	Bass Strait	Seal breeding
Lavinia	4 422	King Island	Heath, dunes
Lime Bay	1 310	Tasman Pen.	Dry sclerophyll forest
Low Islets	8	Furneaux	Australian pelicans
Macquarie Island	12 785	Sub Antarctic	Research wildlife
Moriarty Rocks	3	Bass Strait	Seal breeding
Native Point	127	Tamar	Relict forest
North East Islet	Small	Bass Strait	Seal breeding
Rodondo Island	80	Bass Strait	Ecological reference
Tenth Island	1	Bass Strait	Seal breeding

## Physical Environment

## National Parks, State Reserves, etc. at 30 June, 1980—continued

Name	Area (ha)	Location	Description
NATURE RESERVES—continued			
Three Hummock Island .....	7 284	North west	Sclerophyll forest, heath
Three Sisters-Goat Island .....	37	North west	Seagull rookery
Truchanas .....	406	South west	Huon Pine forest
W. Moncoeur Island .....	10	Bass Strait	Seal breeding
Wright Rock .....	9	Bass Strait	Seal breeding
ABORIGINAL SITES			
Mount Cameron West .....	530	West coast	Aboriginal relics
Sundown Point .....	132	West coast	Aboriginal relics
West Point .....	580	West coast	Aboriginal relics
GAME RESERVE			
Bruny Island Neck .....	1 450	South	Lagoons, coastal heath
CONSERVATION AREAS			
Wildlife sanctuaries under National Parks and Wildlife Service Management and acquired areas—			
Albatross Island .....	16	North west	Seabird rock
Asbestos Range .....	Small	North coast	(a)
Betsey Island .....	170	South east	Scientific reference
Black Pyramid Rock .....	4	North west	Seabird rock
Brigg Islet .....	Small	Furneaux	Bird island
Cat Island .....	30	Furneaux	Bird island
Central Plateau .....	40 000	Central	Alpine vegetation
Chalky Island .....	36	Furneaux	Bird island
Cradle Mountain-Lake St Claire .....	3	North	(a)
Currie Lightkeeper's Residence .....	1	King Island	Historic building
Egg Island .....	120	Huon	Estuarine, wetland
Fluted Cape .....	202	South	(b)
Gull Island .....	32	Furneaux	Bird island
Ida Bay .....	68	South east	(c)
Lackrana .....	220	Flinders Island	Lagoons
Lake Sorell .....	198	Central	Sclerophyll forest
Lavinia .....	200	King Island	(d)
Logan Lagoon .....	2 256	Flinders Island	Coastal
Medeas Cove .....	81	North east	Estuarine, marsh
Mile Island .....	8	Furneaux	Bird island
Mouling Lagoon .....	498	East	Brackish lagoon
Mount William .....	3 217	North east	(a)
Night Island .....	10	Furneaux	Bird island
The Nut .....	57	North west	(c)
Oakleigh Creek .....	688	North central	Nothofagus forest
Oyster Cove .....	10	South	(e)
Oyster Rocks .....	10	Furneaux	Bird islands
Port Arthur .....	11	Tasman Pen.	(f)
Port Cygnet .....	81	South	Foreshore
Reef Island .....	10	Furneaux	Bird island
Risdon Cove .....	70	Hobart	(f)
South Esk River .....	142	North Midlands	River, scenic
Strahan Customs House .....	Small	West coast	Historic building
Tamar River .....	4 600	North	Estuarine, waterfall
Tathams Lagoon .....	13	King Island	Freshwater lagoon
Wright and Egg Islands .....	10	Bass Strait	Bird islands
Wybalenna Island .....	3	Furneaux	Bird island
MUTTONBIRD RESERVES			
Babel Island .....	445	Furneaux	Muttonbird hunting ground
Big Green Island .....	18	Furneaux	Muttonbird hunting ground
East Kangaroo Island .....	142	Furneaux	Muttonbird hunting ground
East and West Sister Islands .....	1 012	Furneaux	Muttonbird hunting ground
Great and Little Dog Islands .....	427	Furneaux	Muttonbird hunting ground
Hunter Island .....	7 365	North west	Muttonbird hunting ground
Little Green Island .....	89	Furneaux	Muttonbird hunting ground
New Year Island .....	109	King Island	Muttonbird hunting ground
Petrel Island .....	Small	Hunter Island	Muttonbird hunting ground
Steep Island .....	30	Hunter Island	Muttonbird hunting ground
WILDLIFE SANCTUARIES UNDER JOINT MANAGEMENT WITH OTHER AUTHORITY			
Badger Corner .....	333	Flinders Island	Foreshore and marine
Beaufront .....	157	Midlands	Deer, Forester kangaroo
Ben Lomond .....	2 665	North east	Wet sclerophyll forest
Burnie Fernglade .....	44	North west	Fern gully
Cape Contrariety .....	4	South east	Muttonbird rookery
Cape Direction .....	5	South east	Muttonbird rookery
Cape Portland .....	663	North east	Waterfowl habitat
Carr Villa .....	62	Launceston	Modified sclerophyll forest
Chauncy Vale .....	357	East central	Dry sclerophyll forest
Deal Island .....	1 623	Bass strait	Island, grassland



## National Parks, State Reserves, etc. at 30 June, 1980—continued

Name	Area (ha)	Location	Description
WILDLIFE SANCTUARIES UNDER JOINT MANAGEMENT WITH OTHER AUTHORITY—continued			
Deloraine	2	North central	Riverine, waterfowl
Derwent River	1 568	South east	Estuarine, river, marsh
Four Mile Creek	607	North	Estuarine, flats
Fulton Park	34	North	Scout camp
Glenorchy Water Reserve	712	Hobart, west	Dry sclerophyll forest
Goose Island	97	Furneaux	Bird island
Grimes Lagoon	173	Midlands	Freshwater lagoon, birds
Goulds Lagoon	8	Hobart, north	Brackish lagoon, birds
Kingston Golf Course	61	Kingston	Dry sclerophyll forest
Lake Dulverton	217	Oatlands	Freshwater lagoon, birds
Launceston Golf Course	61	Launceston	Dry sclerophyll forest
Mount Pleasant	66	Launceston	Dry sclerophyll forest
Paterson Island	16	North central	Modified sclerophyll forest
Patriarchs	101	Flinders	Cape Barren geese
Pipers River	162	North east	Riverine
Punchbowl	24	Launceston	Modified sclerophyll forest
Reekara	2 428	King Island	Heathland, tea tree
Sandspit River	550	East coast	Estuarine, marsh, birds
Scottsdale, N.E. Park	16	North east	Modified wet sclerophyll forest
Sea Elephant River	1 186	King Island	Coastal dunes, heath
Southport Lagoon	3 600	South east	Coastal lagoon
Southwest	242 201	South west	Scenic wilderness
St Clair Lagoon	255	South central	Lagoon
The Lea	150	South	Scout camp
Tooms Lake	22 663	East central	Lake, dry sclerophyll forest
Wayatmah Lagoon	1 809	South central	Storage reservoir
Woodstock Lagoon	20	North	Waterfowl habitat

(a) To be added to a National Park.

(b) To be added to a State Reserve.

(c) To be proclaimed a State Reserve.

(d) To be added to a Nature Reserve.

(e) To be proclaimed an Historic Site.

(f) To be added to an Historic Site.

Note: *Sclerophyll forest*: The term *sclerophyll* means 'hard leaved'. Most Australian forests are dominated by trees (usually eucalypts) and shrubs which have thick, hard leaves—an adaption to the dry Australian environment.

## CLIMATE OF TASMANIA

(The following section was prepared by the Bureau of Meteorology)

## Introduction

Since Tasmania lies between 40° and 43½° south of the Equator and is an island with no point more than 115 kilometres from the sea, its climate is classified as temperate maritime. On the coast the daily temperature range averages about 8° Celsius, rising to about 12° Celsius further inland, indicating a slight continental effect.

The combination of mountainous terrain in the western half of the State and prevailing westerly winds produce a marked west-east variation of climate, and especially of rainfall.

Summers are mild and characterised by greatly lengthened days. The sun reaches a maximum elevation of 70-73° in mid-summer, giving 15 hours of daylight in the north and 15½ hours in the south. In mid-winter, the sun's elevation does not exceed 20-23°, and the shortest day consists of 9¼ hours of daylight in the north, falling to slightly under nine hours in the south.

In winter, westerly winds reach their greatest strength and persistence, causing a distinct maximum in rainfall distribution in the west and north-west. In the east and south-east, rainfall is more evenly distributed throughout the year. Coastal areas of Tasmania enjoy relatively mild winters as compared with Boston (U.S.A.), for example, which is about the same latitude north but experiences much more severe winter weather conditions.

## Winds

The prevailing winds over most of the island are north-west to south-west, with greatest strength and persistence during late winter. Speed and direction vary with the eastward passage of high and low pressure systems. In the summer months, when westerlies are weak, afternoon sea-breezes become the predominant wind in coastal areas. Occasional periods of north-east to south-east winds occur.

The highest average wind speeds are associated with extensive deep depressions over ocean areas south of Tasmania.

### **Temperature**

Sea level temperatures are reduced by approximately 1°C for each 100 metres of altitude. Hence, in a mountainous island like Tasmania the isotherms (lines of equal temperature drawn on a map) will be much influenced by topography. Greater cloud cover over the western half, a result of the persistent westerlies, further decreases day-time temperatures in the west, while the Föhn effect warms and dries the westerly airstreams as they descend to the Midlands, the east coast and south-east districts.

The incidence of frosts is affected markedly by topography, the valleys acting as natural channels for the drainage of cold air at night. Widespread severe frosts are experienced in winter on the Central Plateau and in upland valleys. Inland centres below 300 metres are virtually frost-free only in summer, while the north coast, the east and south-east have few frosts after early October. Above 300 metres there is no frost-free month.

Tasmania only occasionally experiences the extremes of temperature common to the other states. High temperatures recorded in the east and south-east of Tasmania generally occur on the last day of a warm spell during which a dry air mass of mainland origin is advected over the State, from a direction between north and north-west. Some cooling in the lower air layers over the waters of Bass Strait prevents the northern coast from reaching the higher temperatures that are experienced in the south under these conditions. The highest temperatures ever recorded in Tasmania are 40.8°C at Bushy Park in December 1945 and at Hobart in January 1976. The lowest temperature recorded was -12.8°C at Oatlands in May 1902.

The recorded extremes of temperature for Hobart are 40.8°C in January 1976 and -2.8°C in June 1972. Readings above 38°C or below -1°C are rare, the mean maximum temperature in summer being 21.0°C and the mean minimum in winter, 4.8°C.

The mean maximum temperature for January and the mean minimum temperature for July over Tasmania are shown in the two accompanying maps. The mean maximum is the average of daily maxima for January; the mean minimum the average of daily minima for July.

### **Rainfall**

Tasmania's position on the northern edge of the 'Roaring Forties' (a westerly air-stream), its exposure to this stream and the mountainous nature of the terrain are the controlling influences on the amount, distribution and reliability of the State's rainfall.

In the west, average annual rainfall ranges from 1 300 to 1 500 mm on the coast to 3 600 mm at Lake Margaret; in the north-east, from 550 mm on the coast to 1 300 on the highlands; while rainfall in the north-west ranges from 900 mm near the coast to 1 750 mm in the higher inland areas.

Extreme three to five-day rainfalls occur most often on the west coast in late June when the westerlies are increasing in strength and persistence and the sea temperature is well above the land temperature. In the north, short periods of extreme precipitation occur when wind flow is sustained for up to two days from the north-east, usually in mid to late autumn. The high moisture content of such streams from over the relatively warm waters of the Tasman Sea results in heavier, if less prolonged, rainfall than is produced in the westerly streams.

There is a strong gradation in rainfall from west to east, because of topography, with a distinct rain shadow east of the Central Plateau. Parts of the Midlands average less than 500 mm per year. Totals in the east and south-east are higher (up to 1 000 mm on exposed slopes).

Rainfall is least reliable in the east, south-east, Midlands and Derwent Valley. These areas are driest when westerlies are relatively absent or at their strongest—in late summer and late winter, respectively. Highest rainfall in these areas tends to occur in autumn and spring, under the influence of small cyclonic depressions off the east coast.

Effective rainfall is the amount necessary to compensate for evaporation, begin germination and maintain plant growth above wilting point. Average rainfall is sufficient for this purpose from May to September. From October to January the chance of receiving effective rainfall decreases, except in the west and north-west, where the probability is usually better than 50 per cent. In the Midlands, the Derwent Valley, the south-east and east, and in the northern inland, the chance of receiving at least effective rainfall during the summer months is very small.

The average annual rainfall distribution over Tasmania is shown on an accompanying map.

### **Snow and Hail**

Snow and hail can be experienced over the highlands at any time of the year. Heaviest snowfalls occur, as a rule, in late winter and spring, and less frequently in June and July. Extensive snow below 150 metres occurs, on the average, less than once every two years, associated with an unusually vigorous outbreak of cold air from Antarctic regions. There is no permanent snowline, but patches of snow often remain on the highest peaks until December.

Hail is most likely in spring, though possible in any month. Hail storms are a big risk to fruit crops in the Huon Valley and on the Tasman Peninsula, and sometimes cause extensive damage.

### **Thunderstorms**

These are most common in the north and north-west of the State and are associated with the lifting of warm moist air by a cold front. Thunderstorms occur mainly in the summer months. Hobart and Launceston average five to seven storms per year, and the north and north-west, 10 to 15. The Central Plateau and north-eastern highlands report, on average, about five storms per year, while the Midlands, as gauged by Oatlands, has less than three.

### **Floods**

In Tasmania the river system most affected by flooding is the South Esk. The Esk catchment includes most of the north-eastern highlands, where annual rainfall averages about 1 300 mm, and part of the Western Tiers where run-off can be rapid. As many rivers in the South Esk system flow through flat country, flooding can be widespread and disruptive.

Flooding of the Derwent River system can be extensive but is less frequent than in the South Esk. The most severe flood on record in the Derwent occurred in April 1960 with the peak discharge flow recorded as 3 400 cumecs (cubic metres per second) at Macquarie Plains. However, it is most unlikely that flooding of this severity will again occur on the Derwent due to the completion of four dams across the River since 1960 by the Hydro-Electric Commission.

Flooding of rivers in the west and south of the State can be of greater frequency than in the Derwent and Esk systems but because of mountainous terrain and lack of population these pass mostly unnoticed. Similarly, the short, fast-flowing rivers of the east coast flood and fall rapidly, but can cause damage and disruption of road systems.

On two occasions in 1974 torrential rain caused severe flooding in the north-east of Tasmania. There was widespread damage to property, serious damage to road systems and high stock losses in the floods which occurred less than two months apart.

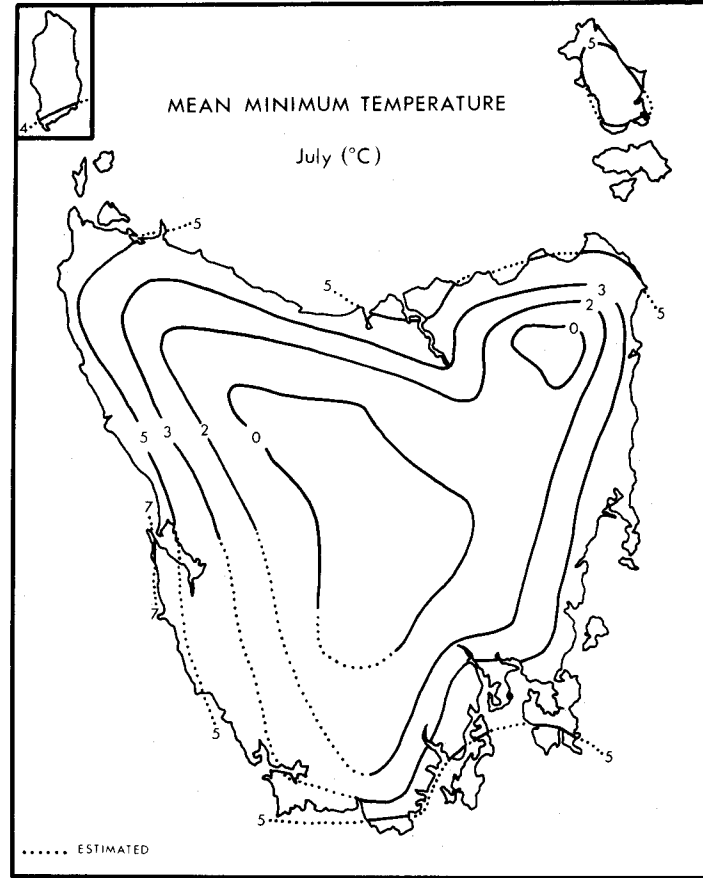
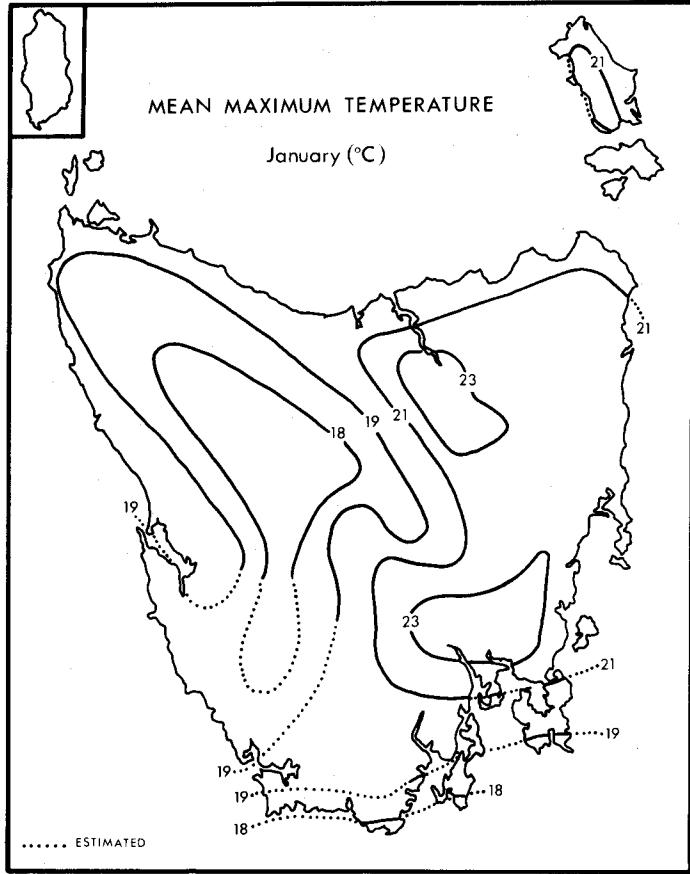
In the north and north-west of Tasmania many rivers have their catchments along the northern edge of the Central Plateau and can flood quickly.

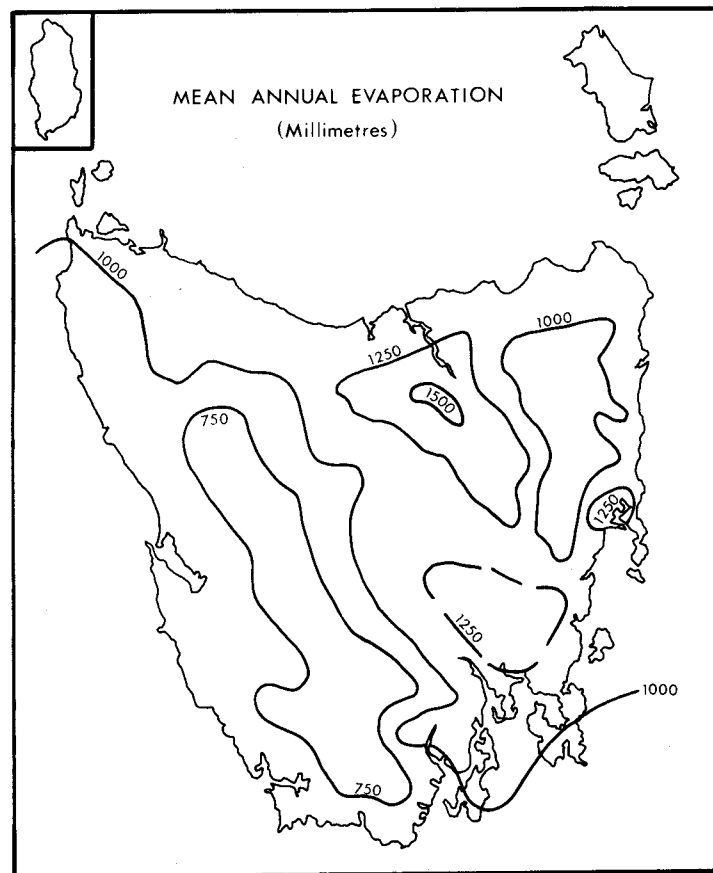
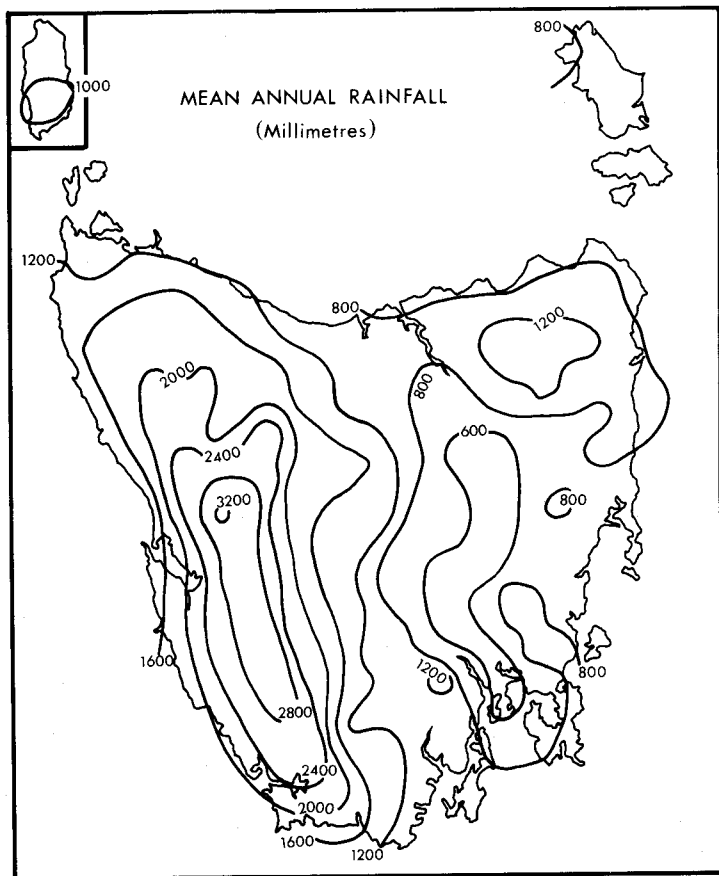
### **Humidity**

The mean relative humidity at both 9.00 a.m. and 3.00 p.m. exceeds 50 per cent at all stations in all months of the year. Relative humidity is generally higher in the morning than in the afternoon, and higher in coastal regions than inland. Days of high temperature combined with uncomfortably high humidity are rare. In the east and south-east, warm dry winds from a west or north-west direction may occasionally have a relative humidity as low as 10 per cent.

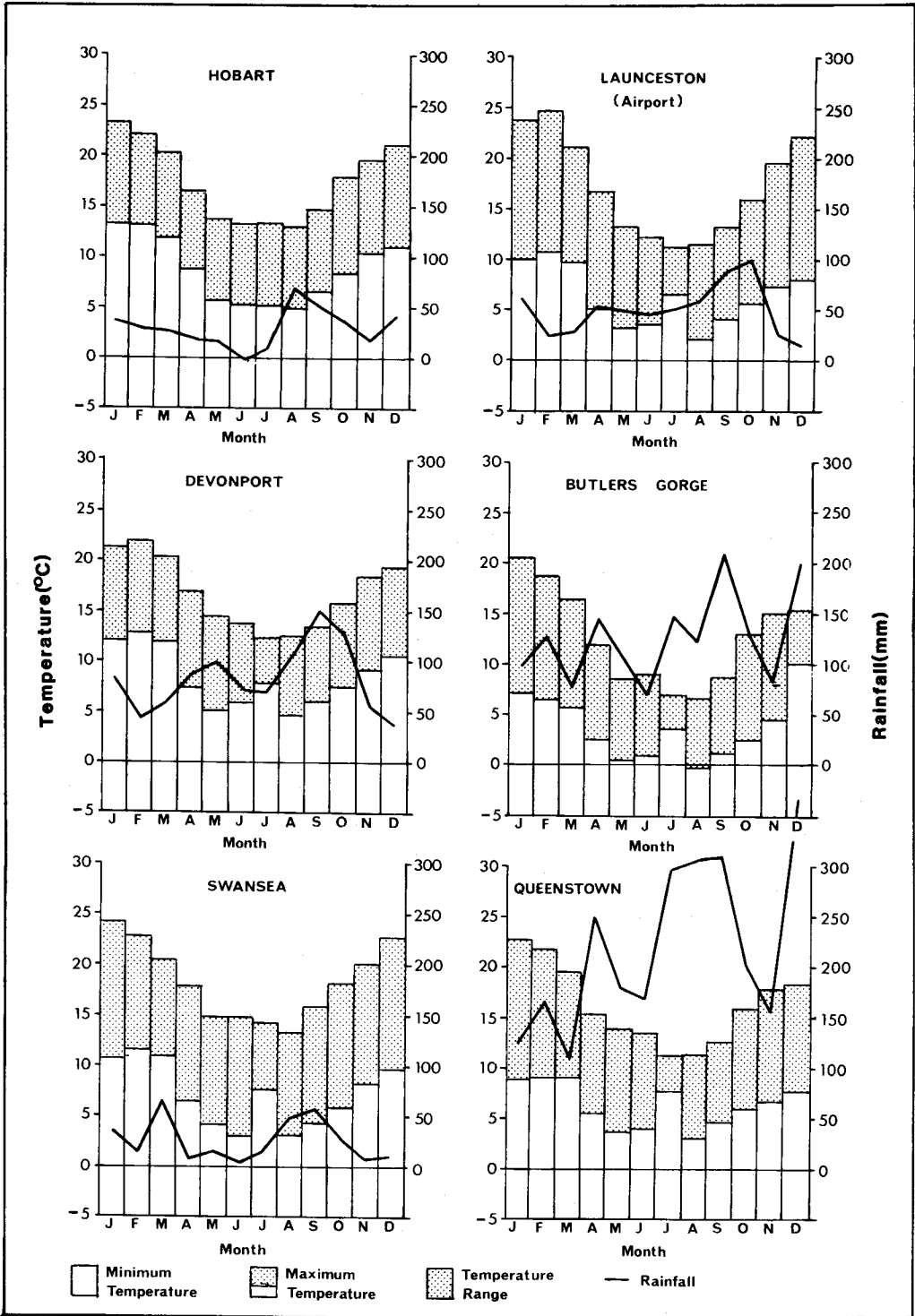
### **Droughts and Bushfires**

Although Tasmania has the highest average rainfall of any state in Australia drought conditions are not unknown. Unlike the remainder of Australia droughts in this State tend to be highly localised and of reasonably short duration. The most severe effects are usually felt over a period of only a few months, but serious rainfall deficiencies can extend over a period of two or three years. Prior to 1972 the most severe long term droughts occurred during the periods 1888-1889, 1897-1898, 1918-1920, 1933-1934, 1945-1946, 1949-1952 and 1967-1969. During the 12-month period ended January 1973 record low rainfall was recorded in the Midlands, East Coast and Northern rainfall districts. All other rainfall districts experienced below normal rainfall during 1972. Some relief from the drought conditions was given by reasonable rainfalls during February 1973.





Temperature and Rainfall at Selected Stations, 1979



Serious bushfires occurred in 1898, 1915, 1946, 1951 and 1967. The bushfires of 7 February 1967 were the most severe in the State's history causing 62 deaths and damage to property estimated to be in excess of \$25m.

### Evaporation

Evaporation depends mainly on wind strength, the moisture deficit of the airstream and on sunshine. The World Meteorological Organisation has asked for standardisation of measurement of evaporation by use of the Class 'A' pan (a galvanised pan, 1.22 metres in diameter and 25.4 centimetres deep) which gives higher figures for evaporation than those obtained from the containers previously used in Australia (Class 'A' pan figures should be multiplied by a factor of about 0.80 to obtain the average potential evapo-transpiration likely for Tasmanian crops). The last map gives details for mean annual evaporation.

At Launceston Airport the annual evaporation is just under 1 500 mm due largely to the prevalence of winds coming from the Western Tiers, which become warmer and drier in their descent to the lower Midlands and Tamar areas, thus increasing evaporation. Monthly evaporation at Launceston Airport has ranged as high as 270 mm in summer but drops to between 25 and 40 mm in winter. This area of high evaporation extends southward to the lower Derwent and Huon areas. The lowest evaporation rate occurs in the Central Plateau, West Coast Ranges and south-west areas where annual evaporation may fall to less than 750 mm. This is due to the high moisture content of the prevailing westerlies and the high average cloud cover. In these areas the monthly evaporation rate may range from about 125 mm in January to only 12 mm in June and July.

Another area of lower evaporation (below 1 000 mm a year) is located in the North-East Highlands.

### Sunshine

The average number of hours of sunshine a year ranges from about 2 500 hours in the northern Midlands to less than 1 750 hours on the west coast and western highlands, this area having the least amount of sunshine in Australia. Hobart averages 2 100 hours per year and Launceston around 2 400.

In January, daily averages of sunshine range from nine hours per day between the Midlands and Launceston to six hours per day on the west and south coasts. In mid-winter, average daily sunshine is down to a maximum of three hours on the east coast and to considerably less on the west coast and highlands.

### The Climate of Hobart

*Climatic Data:* The next table gives the main climatic data for Hobart during the year 1979 on a monthly basis:

**Hobart Weather in 1979**

Month	Shade temperature				Mean daily hours of sunshine	Rainfall	
	Mean maxima	Mean minima	Extremes			1979	Long-term average
			Maximum	Minimum			
	°C	°C	°C	°C	hours	mm	mm
January .....	23.4	13.3	33.2	9.5	9.5	39	49
February .....	22.1	13.3	29.4	6.0	7.7	33	42
March .....	20.3	12.0	27.4	8.4	6.0	27	47
April .....	16.6	8.9	22.6	4.6	4.9	24	54
May .....	13.9	5.9	19.8	1.7	4.7	19	49
June .....	13.4	5.4	18.8	1.7	3.8	2	58
July .....	13.4	5.3	18.3	-0.8	5.1	12	54
August .....	13.0	5.0	18.6	1.3	5.5	71	51
September .....	14.9	6.6	23.1	2.7	5.2	66	51
October .....	18.0	8.4	26.1	3.3	7.7	38	63
November .....	19.6	10.4	30.8	4.6	7.0	18	56
December .....	21.1	11.1	30.8	7.2	8.1	42	57
Total for year .....	..	..	..	..	..	390	631

**Temperatures:** Mean maximum temperature exceeds 21°C in January and February. On average there are two or three days per year with maximum temperatures greater than 32°C. Only once, in February 1968, have three successive days over 32°C been recorded in Hobart. Minimum temperatures below -1°C are rare.

**Rainfall:** There is a strong gradient of rainfall to the immediate west of Hobart caused by the bulk of Mt Wellington. On the south-eastern slopes of the mountain the annual rainfall reaches 1 400 mm (at The Springs and The Gap) while at Fern Tree the annual average is 1 140 mm. The rainfall decreases to about 600 mm in the city area, the annual average being 631 mm at the Regional Office of the Bureau of Meteorology. Some eastern shore suburbs receive as little as 500 mm of rain per annum.

Monthly totals are fairly uniform. The wettest 12 months on record at the Bureau's Hobart Office yielded 1 100 mm (to December 1916) and the driest, 320 mm (to November 1943).

**Relative Humidity:** Highest humidity is at the time of lowest temperature, in the early morning during winter. As temperatures rise to 3.00 p.m., humidity decreases by 15-20 per cent. The seasonal variation is not great, although the average humidity during the winter months is 70 to 75 per cent and during the summer months 58 per cent. Periods of high humidity combined with high temperatures are rare.

**Fog:** Fogs occur in the city about four times per year, in the cooler months, but are more frequent over and near the Derwent River, down which they are often carried on a light north-west wind. Fog frequency is far less than that for either Launceston or Melbourne.

**Wind:** The main wind direction is north-west, induced by the orientation of the Derwent Valley. Next in importance is the sea-breeze (from south or south-east) during summer months.

The strongest wind gust experienced in Hobart was 150 km/h recorded during a storm in September 1965.

**Snow and Hail:** Snow below 300 metres occurs, on the average, less than once per year. Falls lying in the centre of the city, almost at sea level, have occasionally been recorded, the last being in September 1970. Snow generally lies on Mt Wellington during winter and early spring months, but it is rare between November and March. Hail occurs about four times a year, mainly between September and November.

**Frost:** The average annual frequency of days of frost is 29, mostly from June to August. None has been recorded in January. Cold air drainage is found in the hilly suburbs and frosts are common on the valley floors.

**Sunshine and Cloud:** No marked seasonal variation of cloud amount occurs but a strong dependence on time of day is evident. During April to September cloud cover is greater in the afternoon and from October to March it is greater in the morning.

A clear-cut seasonal variation in monthly average hours of sunshine also occurs with amounts varying from 231 hours in January to 111 hours in June.

#### The Climate of Launceston

Being over 50 km from the coast, Launceston exhibits a slight continental effect—greater seasonal and daily variations of temperature and lower rainfall as compared with stations on the coast.

**Temperature:** Average maximum temperature exceeds 24°C in January and February, 21°C in December and March, and 13°C in June and July. Average minimum is about 11°C in summer, falling below 4°C in winter. Freezing temperatures are common during winter mornings, the lowest recorded being -6°C. Up to 50 frost days are to be expected in a year, mostly from May to August. Light frosts may occur in summer.

**Rainfall:** The annual average is 720 mm. The wettest month is July (85 mm) while February and March, the driest months, each receive less than half this amount. The wettest month on record is August 1936 (254 mm). Annual totals range from 467 mm (1908) to 1 057 mm (1946). Some severe thunderstorms are experienced. Snow does not settle in Launceston, but falls occur on surrounding hills.



**Relative Humidity:** Seasonal and daily variations are similar to those for Hobart but the daily readings are 5 to 10 per cent higher.

**Fog:** Occasions of high humidity, associated with moist north-east airstreams, are relatively frequent. Fog occurrence averages more than 30 days a year, mostly between May and August.

**Winds:** The NW-SE orientation of the Tamar Valley has a marked effect on surface winds, which conform mainly to these directions. The north-west wind is often reinforced in the afternoon by a sea-breeze from much the same direction. Strong winds are most common during the colder half of the year and severe squalls can occur in association with thunderstorms.

### Rainfall Statistics

#### Meteorological Districts

Tasmania is divided into nine meteorological districts (not to be confused with statistical divisions) with fairly well-defined land use patterns appropriate to each. The following table shows rainfall totals of each district for recent years:

**Rainfall of Tasmania in Districts**  
(Millimetres)

Period	Northern	King Island	Central Plateau	Midlands
	Crops, dairying, forestry	Grazing, dairying	Grazing (mainly sheep)	
1974.....	1 192	969	1 041	672
1975.....	1 318	1 265	1 299	715
1976.....	839	1 095	905	519
1977.....	903	994	989	511
1978.....	926	875	1 002	557
1979.....	1 045	1 048	973	427
District average(a) .....	1 004	952	986	553

Period	Derwent Valley	South East	East Coast	West Coast	Flinders Island
	Fruit growing, grazing, forestry		Grazing, mining, forestry	Mining	Grazing
1974.....	734	868	1 071	2 260	906
1975.....	931	1 036	949	2 814	717
1976.....	618	888	831	2 306	699
1977.....	612	709	710	2 456	615
1978.....	684	752	880	2 194	823
1979.....	692	603	601	2 522	703
District average (a) .....	681	755	826	2 338	743

(a) Long-term annual average based on 67 years of record.

#### Rainfall at Selected Stations and Rainfall Index by Districts

The table below shows the annual rainfall for selected stations over the last five years.

**Annual Rainfall at Representative Stations**  
(Millimetres)

Station	1974	1975	1976	1977	1978	1979	Long-term average (a)
Avoca.....	735	875	571	527	668	453	565
Beaconsfield.....	1 271	1 328	833	869	951	1 003	961
Burnie (APPM).....	1 214	1 472	866	866	1 067	1 143	1 023
Campbell Town.....	599	725	494	528	582	443	557
Cressy Research.....	825	880	485	647	653	553	660
Deloraine (East).....	1 241	1 429	873	917	872	995	1 104
Franklin.....	941	1 015	913	702	827	683	905

**Annual Rainfall at Representative Stations—continued**  
(Millimetres)

Station	1974	1975	1976	1977	1978	1979	Long-term average (a)
Hobart (Weather Bureau) .....	696	828	663	495	608	390	631
Hobart (Airport) .....	655	735	622	484	511	353	573
Kettering .....	921	1 033	1 058	798	809	n.a.	885
Launceston (Airport) .....	873	820	520	632	687	616	720
Lilydale .....	1 202	1 138	960	930	857	930	982
Lymington .....	840	1 166	n.a.	711	768	661	797
Maydena .....	1 207	1 582	1 106	1 219	1107	1 173	1 235
New Norfolk .....	559	770	516	396	n.a.	n.a.	554
Oatlands .....	610	675	543	463	529	443	567
Queenstown .....	2 400	2 782	2 486	2 576	2 515	2 645	2 532
Ringarooma .....	1 528	1 496	1 148	1 086	1 250	1 226	1 235
Savage River .....	1 886	2 311	1 974	n.a.	1 693	2 108	2 011
Smithton .....	1 223	1 413	1 045	1 118	1 109	1 342	1 110
St Helens .....	1 016	938	856	706	968	531	788
St Marys .....	1 909	1 372	1 150	872	1 193	816	1 040
Swansea .....	830	627	592	468	715	333	618
Triabunna .....	918	819	724	553	710	376	665
Ulverstone .....	1 214	1 361	771	872	954	1 033	969

(a) Number of years of record used to calculate the long-term average varies from station to station.

The next table gives details of a rainfall index for meteorological districts for recent years. The index shows the actual rainfall for a district expressed as a percentage of 'normal' rainfall (where 'normal' rainfall or the 'district average' is the mean for the 67-year period 1913-1979, i.e. the long-term average based on 67 years of record—details relating to annual rainfall and annual district average (normal) rainfall are shown in an earlier table).

**Rainfall Index by Districts, Tasmania**  
(Index showing actual rainfall expressed as a percentage of normal (a) rainfall)

Period	Meteorological district							
	Northern	King Island	Central Plateau	Midlands	Derwent Valley	South-east	East Coast	West Coast
1974 .....	118	102	105	121	107	114	129	97
1975 .....	131	133	131	128	136	136	114	121
1976 .....	83	115	92	94	78	123	100	102
1977 .....	90	105	100	92	90	93	86	105
1978 .....	92	92	101	100	100	99	106	94
1979 .....	104	110	99	77	102	80	73	108

(a) Normal rainfall is the mean for the 67-year period 1913-1979.

### Seasonal Temperatures

The mean temperature for any locality can give a false impression, e.g. a mean temperature of 25°C based on a maximum of 50°C and a minimum of 0°C, all in the one day. A better way of examining a locality's climate is to take the maximum temperature each day and average these readings for each season; similarly, to take the minimum temperature each day and average these readings for each season. These mean maxima and mean minima then give an indication of the daily variation that may be expected. The following table shows the mean maximum and mean minimum temperatures for nine selected stations in summer, autumn, winter and spring.

**Temperatures at Selected Stations, Tasmania, 1979**  
(°C)

Station	Maximum temperatures		Minimum temperatures		Mean temperatures	
	Mean for 1979 season (a)	Departure from normal (b)	Mean for 1979 season (c)	Departure from normal (b)	Mean for 1979 season	Departure from normal (b)
<b>Summer (December to February)</b>						
Hobart .....	21.6	+0.6	12.7	+1.4	17.1	+1.0
Launceston .....	24.1	+0.4	11.5	+0.4	17.8	+0.4
Cape Bruny .....	18.4	+0.8	11.9	+1.0	15.1	+0.9
Devonport .....	20.8	-0.3	11.7	+0.2	16.2	0.0
Maydena .....	21.2	+0.3	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oatlands .....	20.9	-0.1	7.9	0.0	14.4	0.0
St Helens .....	22.4	+0.5	11.9	+1.0	17.1	+0.8
Savage River .....	19.0	+0.2	10.3	+0.9	14.6	+0.5
Queenstown .....	20.9	-0.1	8.8	+0.7	14.8	+0.3

**AUTUMN (March to May)**

Hobart .....	16.9	-0.2	9.0	+0.3	12.9	0.0
Launceston .....	18.6	-0.3	6.5	-0.5	12.5	-0.4
Cape Bruny .....	15.2	-0.1	9.7	+0.3	14.4	+0.1
Devonport .....	17.2	-0.4	8.2	-0.7	12.7	-0.5
Maydena .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oatlands .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
St Helens .....	18.7	+0.3	8.2	+0.6	13.4	+0.4
Savage River .....	14.7	+0.1	6.7	-0.5	10.7	-0.2
Queenstown .....	16.3	-0.6	6.0	0.0	11.1	-0.3

**WINTER (June to August)**

Hobart .....	13.2	+1.2	5.2	+0.4	9.2	+0.8
Launceston .....	13.1	+0.4	2.5	+0.6	7.8	+0.5
Cape Bruny .....	11.9	+0.6	6.6	+0.5	9.2	+0.5
Devonport .....	12.8	0.0	4.3	-0.1	8.5	0.0
Maydena .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oatlands .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
St Helens .....	14.9	+1.3	2.6	-0.6	8.7	+0.3
Savage River .....	10.1	+0.4	4.1	+0.4	7.1	+0.4
Zeehan .....	12.1	0.0	3.6	+1.2	7.8	+0.6

**SPRING (September to November)**

Hobart .....	17.5	+0.8	7.6	0.0	12.5	+0.4
Launceston .....	18.1	+0.4	7.0	+0.4	12.5	+0.4
Cape Bruny .....	14.7	-0.1	7.4	-0.3	11.0	-0.2
Devonport .....	15.9	-0.5	7.6	+0.4	11.7	0.0
Maydena .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Oatlands .....	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
St Helens .....	18.3	+0.8	6.4	-0.2	12.3	+0.3
Savage River .....	13.3	+0.2	5.8	+0.5	9.5	+0.3
Zeehan .....	15.5	-0.2	5.8	+0.8	10.6	+0.3

(a) Average of maximum daily temperatures for season.

(b) 'Normal' is the mean for the season averaged for the available years of record.

(c) Average of minimum daily temperatures for season.

**ENVIRONMENTAL CONTROL****Department of the Environment**

Established in October 1972, the Department of the Environment is headed by a Director of Environmental Control who is responsible to the Minister for the Environment. Staff include a number of scientific experts who are responsible for particular aspects of pollution control and assessment—chemists, noise control, research, air and water pollution officers and a waste management officer.

The *Environment Protection Act 1973* gives the Director the general duties of: (i) protecting the State's environment; (ii) ensuring the control or prevention of any act or emission which causes or may lead to pollution; and (iii) co-ordinating all necessary activities (government or private) to protect, restore or improve Tasmania's environment. In addition to the general duties the Act also confers the following more specific functions on the Director: (i) consider means and initiate steps for the protection of the environment and for the prevention, control, abatement or mitigation of pollution; (ii) carry out investigations into environmental protection problems; (iii) obtain advice from experts in the field of environmental protection; (iv) review progress made in attaining objectives of the Act and publicise steps taken to protect the environment; (v) advise on pollution standards and methods of sampling and testing for pollutants; and (vi) promote and co-ordinate planning projects for environmental protection.

*Coverage of the Act:* In the case of inconsistencies the *Environment Protection Act 1973* prevails over the provisions of all other Acts with two exceptions: (i) *Oil Pollution Act 1961*; and (ii) *Public Health Act 1962*. Since provisions of the *Environment Protection Act* would intrude into various sectors of existing legislation, the *Statute Law Revision (Environment Protection) Act 1973* was introduced concurrently. The effect of this statute was to amend the Criminal Code, the *Local Government Act 1962*, the *Mining Act 1929*, the *River Pollution Act 1881*, the *Hydro-Electric Commission Act 1944* and the *Water Act 1957* to conform with the *Environment Protection Act 1973*.

Staff of the Department of the Environment continually visit most areas of Tasmania either monitoring or investigating complaints and pollution problems. Departmental officers have attended interstate seminars and conferences and visited other environment protection authorities for exchange of information. The Department participates in the work of the Australian Environment Council and has staff on a number of the Council's committees. In addition the Department is represented on the committee of the Keep Australia Beautiful Council. The Department is also represented on State Government inter-departmental committees which deal with environmental matters. Environmental seminars and lectures have been organised by the Department and special papers written dealing with the environment.

*Litter Control:* In 1978 the Government appointed a Litter Advisory Council to make recommendations to the Government on means by which greater control could be effected over litter. In 1979 a full-time Litter Control Officer was appointed. His duties are concerned solely with the problem of litter control.

*Oil Pollution Control:* In 1978 an appointment was made to the position of State Oil Pollution Control Officer within the Department. The Tasmanian supplement to the National Plan to combat the pollution of the sea by oil has been up-dated and published. A State Oil Pollution Committee has also been formed to function under the National Plan with the following functions: (i) to be a source of information and advice to the Government through the Marine Pollution Committee on matters of oil pollution; and (ii) to operate in combating any actual incident.

**Environment Protection Advisory Council**

The 1973 legislation also provided for the creation of the Environment Protection Advisory Council. Under the chairmanship of the Director of Environmental Control the Council has members drawn from government and private sectors and representing a number of diverse interests; e.g. the mining, secondary, rural and forestry industries, conservation groups, the Hydro-Electric Commission, trade unions, public health, etc. The Council's task is to advise the Minister and make recommendations to the Government on environmental

matters. The Council is empowered to appoint committees to investigate specific subjects. Committees appointed are—Noise Committee, Waste Committee, Air Committee and the Water Committee. As a result, regulations covering all the above pollution subjects have been promulgated.

An Intensive Animal Husbandry Committee was set up in August 1975 to deal with pollution problems posed by this industry. Guidelines have now been issued to operators and local government authorities setting out design and operation procedures to control pollution problems in the industry.

### Environmental Impact Studies

The State Government has adopted a policy that requires public authorities to undertake environmental impact studies before proceeding with any development which may have a significant effect upon the State's environment. Responsibility for ensuring that such studies are performed rests with the decision-making authority. Co-ordination and evaluation of environmental impact studies are performed by the Director of Environmental Control.

Scope of an environmental impact study includes:

- (i) A statement of the major objective of the proposed project.
- (ii) An analysis of the technological likelihood of achieving the objective.
- (iii) A statement of alternative practical plans for achieving the objective.
- (iv) An outline of existing characteristics of the environment prior to implementation of the development project.
- (v) Separate reports on alternative practical engineering plans for achieving the goal.
- (vi) An assessment of the probable effect of the project upon the environment.

Such a study is to be used by the proposing body in determining environmental safeguards. For the Director of Environmental Control a study will provide a basis for review of the safeguards and for making recommendations for further protective measures.

To assist with co-ordination and evaluation of environmental impact studies, the Government has established an Environmental Impact Study Assessment Group, comprising eight specialists in various fields related to the environment. The group gives broad direction to impact studies and provides advice and assessment services to the Director of Environmental Control and developers.

### Further References

- DAVIES, J. L. (ed.) *Atlas of Tasmania* (Lands and Surveys Department, Hobart, 1965)  
*Monthly Weather Review, Tasmania* (published monthly by the Bureau of Meteorology, Hobart)

## Chapter 3

### GOVERNMENT AND ADMINISTRATION

#### Introduction

Government in Tasmania is exercised at three levels:

- (i) The Federal Government, with authority based on a written constitution, and centred in Canberra.
- (ii) The State, with residual powers, and centred in Hobart.
- (iii) The cities and municipalities, with authority derived from State acts, and operating in 49 sub-divisions of the State.

This chapter deals primarily with the State Government and with Tasmanian representation in the Federal Parliament. The administration of the cities and municipalities is described in Chapter 4, 'Local Government'. A more detailed outline of the Tasmanian system of government is included in the 1976 and earlier editions of the *Year Book*.

#### TASMANIAN REPRESENTATION IN FEDERAL PARLIAMENT

The Federal Parliament consists of the Queen, a Senate and a House of Representatives. The Queen is represented in Australia by the Governor-General.

#### The House of Representatives

Representation in the House of Representatives is based upon the general principle of having, as nearly as practicable, electorates with equal numbers of electors. This is only possible if regular electoral redistributions are implemented. The following table indicates the state of the House of Representatives at the elections immediately following electoral redistribution and/or passage of legislation creating additional electorates:

Membership: House of Representatives

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T. (b)	Total
1948.....	28	20	10	6	5	5	1	—	75
1949 (c).....	47	33	18	10	8	5	1	1	123
1955 (c).....	46	33	18	11	9	5	1	1	124
1969 (c).....	45	34	18	12	9	5	1	1	125
1974.....	45	34	18	12	10	5	1	2	127
1977 (c).....	43	33	19	11	10	5	1	2	124
1980.....	43	33	19	11	11	5	1	2	125

(a) Representative in House since 1922; full voting rights granted 1969.

(b) Representative in House since 1949; full voting rights granted 1966.

(c) Election following an electoral redistribution.

#### *Elections for the House of Representatives*

Australia is currently divided into 125 single-member electorates and electors are required to cast a vote for every candidate standing within the electorate in order of their preference. Election of members is carried out in accordance with the principles of the absolute majority through use of the alternative vote (see 'The Legislative Council—Preferential Voting' for a description of similar electoral principles). If a vacancy occurs in the House of Representatives, it is filled by holding a by-election in the electorate concerned. Elections for the House of Representatives must be held at least every three years.

The following table lists the Tasmanian members of the House of Representatives elected on 10 December 1977, together with the party affiliation and electorate of each member:

House of Representatives: Tasmanian Members

Member	Party affiliation	Electoral division
Burr, M. A. ....	Liberal	Wilmot
Goodluck, B. J. ....	Liberal	Franklin
Groom, R. J. (a) ....	Liberal	Braddon
Hodgman, M. ....	Liberal	Denison
Newman, K. E. (b) ....	Liberal	Bass

(a) Federal Minister for Housing and Construction.

(b) Federal Minister for National Development.

### The Senate

In the Senate, each state is represented by ten senators and, in addition, the Australian Capital Territory and the Northern Territory have been represented by two senators each since the election of 13 December 1975. Each senator's term is normally six years, as half the senate seats come up for election every three years. In accordance with the *Senate Representation of Territories Act*, senators from the Northern Territory and A.C.T. are elected for the term of the House of Representatives. However, in the case of a double dissolution of both Houses, half the senators are elected for a six-year term (the first five elected in each state) and half for a three-year term.

In Senate elections each state is an electorate. Electors are required to cast a vote for every candidate standing within the state in order of their preference. Election of members is carried out in accordance with the principles of proportional representation by the single transferable vote (see 'Elections for the House of Assembly' later in this Chapter for a description of similar electoral principles).

The following table lists the senators for Tasmania elected on 13 December 1975 and 10 December 1977 (senators elected on 10 December 1977 commenced their terms of office on 1 July 1978), their party affiliation and year of retirement.

Senate: Tasmanian Members

Senator	Party affiliation	Retires in year
Archer, B. R. ....	Liberal	1984
Grimes, Dr D. J. ....	A.L.P.	1984
Harradine, R. W. B. ....	Independent	1981
O'Byrne, J. H. ....	A.L.P.	1981
Rae, P. E. ....	Liberal	1981
Tate, M. C. ....	A.L.P.	1984
Townley, M. ....	Liberal	1981
Walters, M. S. (Mrs) ....	Liberal	1984
Watson, J. ....	Liberal	1984
Wriedt, K. S. ....	A.L.P.	1981

If a vacancy occurs in the Senate, the appropriate state government nominates a replacement, of the same political affiliation, who sits until the next general election (either for the House of Representatives or for the Senate), when an election is held to fill the vacancy. If a senator fills such a vacancy through an election held at the same time as an election for the House of Representatives, his term will be the same as if the vacating member's term were to run its full course. If the vacant seat is contested at an ordinary Senate election, then six, instead of the normal five candidates, will be elected in the state affected and the senator last elected will fill the vacancy for a term shorter than the full six years.

## THE TASMANIAN GOVERNMENT

### Division of Power

Under the *Commonwealth of Australia Act 1900*, the State of Tasmania surrendered part of its sovereignty and it was possible, at that point in time, to classify the totality of powers to be vested in the Federal Government and the State as follows:



- (i) Exclusive powers to be exercised by the Federal Government alone.
- (ii) Concurrent powers to be exercised both by the Federal Government and the State (subject to the supremacy of Federal Government law in cases of inconsistency).
- (iii) Residual powers to be exercised by the State.

Since Federation there have been considerable changes in functions actually performed by the two governments due to constitutional amendments and to inter-governmental agreements affecting function. It will suffice, therefore, to list the main fields of activity of the Federal Government today:

Foreign affairs and diplomatic representation; maintenance of the armed forces; customs and excise; posts and telegraphs; control of broadcasting and television; control of civil aviation; repatriation of ex-servicemen; immigration; industrial arbitration for national industries; control of coinage and currency; overseas trade promotion; employment service; age, invalid and widows' pensions; national health benefits; federal territories and overseas dependencies; census and statistics; meteorological service; federal courts and police; control of banking; collection of sales and income taxes; housing assistance and defence service homes; scientific and industrial research; management of state and national debt; lighthouses and navigation; Australian territorial sea and sea-bed. (The Constitution of the Commonwealth of Australia is reprinted in Chapter 1 of *Year Book, Australia, 1977-1978* (Cat. No. 1301.0).)

The departments, authorities, etc. of the Tasmanian Government are listed in a later section of this chapter headed 'The Present System of Government.'

### The State Governor

Tasmania follows British tradition and accepts as its Queen, Elizabeth the Second. Her Majesty appoints the Governor who acts as head of state, generally for a five-year term. The relationship existing between the Queen and the British Parliament is broadly the same as that existing between the Governor and the Tasmanian Parliament. For details relating to the Governor's powers and functions, see the 1976 and earlier editions of the *Year Book*.

Until the succession of Sir Stanley Burbury, KBE on 5 December 1973, Tasmanian governors had come from the United Kingdom since the first settlement, although in some other states and the Commonwealth, Australians had been appointed to vice-regal offices. Sir Stanley was sworn in on 5 December 1973, succeeding Lt-General Sir Edric Bastyan, a former Governor of South Australia.

The next table shows the succession of governors from 1930. Administrators and lieutenant-governors (who act in place of the Governor in the event of his death, incapacity, removal or absence from the State) are only included where necessary, to maintain a continuous time series (i.e. short periods of relief during a governorship are excluded). A complete list from 1803 is included in the 1976 *Year Book*.

Succession of Governors, Acting Governors, Administrators, etc. from 1930

Name	Designation	Period
Sir James O'Grady, KCMG	Governor	23.12.24-23.12.30
Sir Herbert Nicholls, KCMG	Lieutenant-Governor	23.12.30- 4. 8.33
Sir Ernest Clark, KCMG, KCB, CBE	Governor	4. 8.33- 4. 8.45
Sir John Morris, KT	Administrator	4. 8.45-24.12.45
Admiral Sir Hugh Binney, KCB, KCMG, DSO	Governor	24.12.45- 8. 5.51
Sir John Morris, KCMG	Administrator	8. 5.51-22. 8.51
Rt Hon. Sir Ronald Cross, Bart, KCMG, KCVO	Governor	22. 8.51- 4. 6.58
Hon. Sir Stanley Burbury, KBE	Administrator	4. 6.58-21.10.59
Rt Hon. the Lord Rowallan, KT, KBE, MC	Governor	21.10.59-25. 3.63
Hon. Sir Stanley Burbury, KBE	Administrator	25. 3.63-24. 9.63
Lt-General Sir Charles Gairdner, KCMG, KCVO, KBE, CB	Governor	24. 9.63-11. 7.68
Hon. Sir Stanley Burbury, KBE	Administrator	11. 7.68- 2.12.68
Lt-General Sir Edric Bastyan, KCMG, KCVO, KBE, CB	Governor	2.12.68-30.11.73
Hon. Mr Justice Green	Administrator	30.11.73- 5.12.73
Hon. Sir Stanley Burbury, KCVO, KBE	Governor	5.12.73-

## The Cabinet and Executive Government

### General

In Tasmania, as in the other States and the Federal Government, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as 'Cabinet', or 'responsible' government. Its essence is that the head of the state (in Tasmania, the Governor representing Her Majesty the Queen) should perform governmental acts on the advice of his ministers; that he should choose his principal ministers of state from members of parliament belonging to the party, or coalition of parties, commanding a majority in the popular house; that the ministry so chosen should be collectively responsible to that house for the government of the country; and that the ministry should resign if it ceases to command a majority there.

The Cabinet system operates chiefly by means of constitutional conventions, customs or understandings, and through institutions that do not form part of the legal structure of the government at all. In law, the executive power of the State is exercised by the Governor who is advised by the Executive Council which he himself has appointed and which meets for certain formal purposes. The whole policy of a ministry is, in practice, determined by the ministers of the Crown, meeting without the Governor under the chairmanship of the Premier, and this body is known as the Cabinet.

### The Appointment of Ministers

Legally, ministers hold office during the pleasure of the Governor. In practice, however, the discretion of the head of state in the choice of ministers is limited by the conventions on which the Cabinet system rests. When a ministry resigns, the Governor's custom is to send for the leader of the party which commands a majority in the lower house, and to commission him as Premier, to 'form a ministry'—that is, to nominate other persons to be appointed as ministers of the Crown and to serve as his colleagues in the Cabinet.

The *Constitution Act 1854* defined the Parliament of Tasmania as 'the Governor and the Legislative Council and House of Assembly together'. Although no legal requirements enforce it, the selection of all ministers of the Crown from Parliament stems from the British tradition and sharply contrasts with the American system which requires its ministers not to be members of Congress.

At 1 September 1980 the ministry, led by the Hon. D. A. Lowe, was:

Ministry at 1 September 1980

Name	House	Ministerial responsibilities (a)
The Hon. D. A. Lowe .....	Assembly	Premier; Treasurer; Energy
The Hon. M. T. C. Barnard .....	Assembly	Deputy Premier; Economic Planning and Development; Tourism; Licensing
The Hon. B. K. Miller .....	Legislative Council	Attorney-General; Health Services; Immigration and Ethnic Affairs
The Hon. H. N. Holgate .....	Assembly	Education; Racing and Gaming; Police and Emergency Services
The Hon. T. G. Aulich .....	Assembly	Construction, Industrial Relations and Man-power Planning; The Arts
The Hon. M. W. Field .....	Assembly	Main Roads and Transport; Local Government
The Hon. J. J. Amos .....	Assembly	Primary Industry; Environment; Forests; Water Resources
The Hon. B. K. Lohrey .....	Assembly	Lands, National Parks and Wildlife; Community Welfare and Child Care; Handicapped Persons' Services
The Hon. D. J. Baldock .....	Assembly	Housing; Mines; Recreation
The Hon. G. H. James .....	Assembly	Public Health; Consumer Affairs; Administrative Services

(a) See section 'The Present System of Government' later in chapter for more detailed statement of responsibility.

### Premiers

The following table lists Premiers of Tasmania from 1930 (a complete list from 1856 is included in the 1976 *Year Book*):

## Premiers from 1930

Name of Premier	Term of office		Duration of office (months)
	From	To	
J. C. McPhee .....	15. 6.28	15. 3.34	69
Sir Walter Lee .....	15. 3.34	22. 6.34	3
A. G. Ogilvie (a) .....	22. 6.34	10. 6.39	60
E. Dwyer Gray .....	11. 6.39	18.12.39	6
R. Cosgrove .....	18.12.39	18.12.47	96
E. Brooker .....	18.12.47	25. 2.48	2
R. Cosgrove .....	25. 2.48	26. 8.58	126
E. E. Reece .....	26. 8.58	26. 5.69	129
W. A. Bethune .....	26. 5.69	3. 5.72	35
E. E. Reece .....	3. 5.72	31. 3.75	35
W. A. Neilson .....	31. 3.75	1.12.77	32
D. A. Lowe .....	1.12.77		

(a) Tasmania had an unbroken succession of Labor premiers, starting with the Ogilvie Ministry (1934) until the electoral defeat of the Reece government on 26 May 1969.

## The House of Assembly

The Tasmanian Lower House comprises 35 members elected from five seven-member electorates. The *Constitution Act* 1972 provided that the Assembly chosen at the elections held on 22 April 1972 would continue in office for a maximum term of five years, and that thereafter the term for the House of Assembly would be four years. This Assembly was dissolved after four years and seven months and elections were held on 11 December 1976. (See the 1976 *Year Book* for terms applying prior to 1972.) The next elections were held on 28 July 1979, 17 months earlier than required.

## Elections for the House of Assembly

Elections for the House of Assembly are conducted under a system which can be classified as proportional representation by the single transferable vote (commonly known as the Hare-Clark system).

The essential features of the system are as follows:

- (i) For an elector to cast a valid vote, he must express at least seven preferences.
- (ii) Party groups are identified on ballot papers, with ungrouped candidates listed together on the right of the ballot paper. Candidates' positions within groups are determined by a system of rotation so that in designated 'preferred' positions, all candidates appear on the same number of ballot papers.
- (iii) To secure election, candidates must secure a quota in accordance with the Droop formula (i.e. the total first-preference votes in the constituency divided by eight, plus one vote; see below).
- (iv) Should a candidate secure an exact quota on first preferences, he is declared elected and his voting papers are set aside as finally dealt with.
- (v) Any candidates who secure a surplus of first preferences above the quota are declared elected.
- (vi) For each elected candidate, commencing with the one with the largest surplus, a transfer value is calculated by dividing the successful candidate's number of surplus first preference votes by his total number of first preferences. All his voting papers are then re-examined and the number of next available choice votes for each of the non-elected candidates determined and multiplied by the transfer value. The resulting numbers are added to the non-elected candidates respective numbers of first preference votes.
- (vii) Where a transfer raises the number of votes obtained by a candidate up to a quota, he is declared elected. That particular transfer is then completed but no further votes of any other candidate are transferred to him.
- (viii) In the case of a candidate who reaches a quota through transferred votes, his surplus votes above the quota are divided by the number of voting papers transferred to him in the last transfer. The resulting fraction is the transfer

value which is applied to voting papers he obtained in the last transfer which are then transferred to remaining unelected candidates according to the next available choices.

- (ix) When transfers have been completed in respect of all candidates who obtained a surplus above a quota as a result of the above procedures, the candidate who is lowest on the poll is excluded and his voting papers are distributed to the remaining non-elected candidates according to the next available choices. His own first preference votes are transferred first, retaining a value of one each. Voting papers that have been transferred to him are dealt with in the order of the transfers already carried out and retain the respective transfer values at which he obtained them.
- (x) Steps (vi) to (ix) are continued, as necessary, until either seven candidates are elected or all candidates except seven have been excluded. In the latter case, unelected candidates not already elected are declared elected.

The scrutiny of preferences and distribution of choices cannot commence until all votes are to hand—this does not occur until the Friday following polling day. As might be expected, the counting of votes, calculation of transfer values and the transferring of votes are time-consuming operations and a week may elapse before the declaration of a poll.

NOTE: The 'Droop formula' states that the minimum number of votes necessary to secure election is the total number of votes divided by one more than the number of members to be elected, plus one vote.

*Advantages of the Hare-Clark System:* The major advantage claimed for the system is that the composition of the House of Assembly tends to faithfully reflect the wishes of the electors viewed on a state basis, and that a party with a minority of first preferences is most unlikely to obtain a majority of seats, as sometimes occurs in systems with single-member constituencies. By way of example, South Australia, using single-member electorates has sometimes been governed by parties receiving a minority of votes but a majority of seats; other Australian states have had similar experiences. A further significant advantage is that all electors have a wide choice of candidates *within* the major parties, whereas in single-member electorates there is often no choice of candidates for an elector determined to vote for a particular major party. In the latter case, an elector may be forced to vote for a candidate whom he considers to be less than competent.

The House of Assembly elections held on 28 July 1979 resulted in the re-election of the Lowe-led Labor Government. The Government's majority was increased from one seat to five, with the A.L.P. holding 20 seats and the Liberal Party 15. One minister in the previous administration lost his seat while 7 new members were elected. For the whole State, first preference votes cast, by party, were as follows: A.L.P., 129 973 (52.23%); Liberal Party, 98 845 (39.72%); Australian Democrats, 6 858 (2.76%); independents, 3 608 (1.45%); informal, 9 582 (3.85%); total, 248 866 (100.00%). However, judgement in the Supreme Court voided the election of three Labor members returned at the election and a writ was issued to elect seven members for the Division of Denison. A by-election was held on 16 February 1980 which saw the election of 3 Labor, 3 Liberal and 1 Australian Democrat members. The composition of the House of Assembly after the by-election was: Labor 19 seats; Liberal 15 seats; and Australian Democrats, one seat.

The next table shows the results of House of Assembly elections by parties from 1959:

Representation of Parties for the Whole State: House of Assembly

Election Year	Labor		Liberal		Other (a)	
	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won	Proportionate share (b)	Seats won
1959.....	15.58	17	14.37	16	5.05	2
1964.....	17.97	19	13.47	16	3.56	—
1969.....	15.91	17	14.68	17	4.41	1
1972.....	19.22	21	13.43	14	2.35	—
1976.....	18.37	18	15.57	17	1.06	—
1979.....	19.01	20	14.46	15	1.53	—

(a) Independents and minority parties.

(b) State treated as single electorate and proportionate share of seats calculated on basis of first preference votes cast for parties.

*Votes Recorded at Assembly Elections*

Voting in general elections since 1959 is shown in the following table:

House of Assembly Elections, Tasmania

Year of election	Electors on roll	Votes recorded		Informal votes	
		Number	As percentage of enrolled electors	Number	Percentage of total votes recorded
1959.....	180 344	170 559	94.6	9 816	5.8
1964.....	193 418	184 571	95.5	7 980	4.3
1969.....	210 268	198 571	94.4	9 248	4.7
1972.....	216 846	205 803	94.9	7 533	3.7
1976.....	258 550	244 424	94.5	9 294	3.8
1979.....	265 428	248 866	93.8	9 582	3.9

The percentage of informal votes in the previous table is not particularly high, even though the voting papers for six or seven-member electorates are necessarily more complicated than those for single-member electorates. At elections prior to 1976 voters were required to mark at least three candidates in order of preference. However, an amendment to the *Electoral Act* made prior to that election required voters to mark at least seven candidates in order of preference. This change has had no obvious effect on the number of informal votes cast.

*Constituencies of House of Assembly*

The five constituencies for the House of Assembly are identified with the five electoral divisions electing members to the Federal House of Representatives. The next table and map show composition and extent of each electorate. The map shows new electoral boundaries that were adopted in November 1977 following an electoral redistribution for the House of Representatives.

House of Assembly: Enrolments by Electorate at 30 June

Electorate	1975	1976	1977	1978	1979	1980
Bass.....	46 727	47 338	48 458	53 607	53 441	55 395
Braddon.....	52 652	54 500	55 511	50 858	51 212	53 321
Denison.....	50 516	52 278	51 453	54 769	54 355	55 156
Franklin.....	49 470	50 900	53 063	52 041	52 691	55 010
Wilmot.....	49 697	51 264	53 524	52 000	52 606	54 201
Total.....	249 062	256 280	262 009	263 275	264 305	273 083

*By-Elections*

In the case of a vacancy occurring in the House of Assembly, there is provision for the Chief Electoral Officer to publicly invite nominations from candidates who were unsuccessful at the last general election in the constituency which elected the vacating member. If one nomination only is received the consenting candidate is declared elected and the Governor notified to this effect.

If more than one such nomination is received, the Chief Electoral Officer is required to examine the voting papers counted for the vacating member at the last general election. In the simple case—where the vacating member obtained a surplus of first preference votes above the quota—this can be confined to voting papers expressing that first preference. In the more difficult case—where the vacating member did not obtain a quota on first choices—it is necessary to take into account not only original first-choice papers but also all voting papers representing votes transferred to the vacating member.

The vacating member's voting papers, as defined above, are examined and all his votes are transferred to the consenting candidates according to the preferences expressed thereon. Next available choices derived from first-choice votes of the vacating member have a transfer value of one, but from votes he obtained by transfer, only the value at which he obtained them. For the purpose of the count, first-choice votes received by the consenting candidates at

the general election are not relevant—the selection is based on preferences as revealed by the voting papers of the vacating member.

When the number of votes in favour of each consenting candidate has been ascertained, the final selection is by the method of the absolute majority through the alternative vote. If no nominations are received from candidates unsuccessful at the last general election, then an election is held to fill the vacancy.

### *Dissolution of House of Assembly*

The Governor may dissolve the House of Assembly whenever he considers it desirable but he has no power to dissolve the Legislative Council. In effect then, the Legislative Council is a perpetual body except that approximately one-sixth of its seats fall vacant annually. As there is no provision for a double dissolution the Legislative Council, by rejection of a Supply Bill, can force the House of Assembly to seek a dissolution without itself needing to face the electorate. This last occurred in 1948. In practice, the Governor considers dissolving the House of Assembly only when requested to do so by his ministers.

### *House of Assembly, Members*

The following table shows members of the House of Assembly and their party allegiance as at 1 September 1980:

Members of the House of Assembly as at 1 September 1980

Electoral Division	Member's name	Party affiliation
Bass .....	Barnard, The Hon. Michael Thomas Claude (a) Beswick, Richard John Bushby, Maxwell Holmes Holgate, The Hon. Harold Norman James, Gillian Hilma Robson, Neil Maxwell Willey, Mary Lindsay Caroline	A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal A.L.P.
Braddon .....	Bonney, Raymond Claude Cornish, Ronald Coughlan, The Hon. John Anthony Davies, The Hon. Ronald Glen (b) Field, The Hon. Michael Walter Groom, Francis Roger Weldon, Michael William	Liberal Liberal A.L.P. A.L.P. A.L.P. Liberal A.L.P.
Denison .....	Amos, The Hon. Julian John Bingham, Eardley Max Devine, John Herbert Graham, Robert James Haros, Gabriel George Mather, Robert Sanders, Norman Karl	A.L.P. Liberal A.L.P. A.L.P. Liberal Liberal Aust. Dem.
Franklin .....	Adams, Godfrey Harry (c) Aird, Michael Anthony Beattie, John Maxwell Cleary, Thomas John Lowe, The Hon. Douglas Ackley (d) McKinnon, William Gillies Pearsall, The Hon. Geoffrey Allan (e)	A.L.P. A.L.P. Liberal Liberal A.L.P. A.L.P. Liberal
Wilmot .....	Aulich, The Hon. Terrance Gordon Baldock, The Hon. Darrel John Braid, Ian Maxwell Gray, Robin Trevor Lohrey, The Hon. Andrew Barnard Page, Graeme Reginald Polley, The Hon. Michael Ronald	A.L.P. A.L.P. Liberal Liberal A.L.P. Liberal A.L.P.

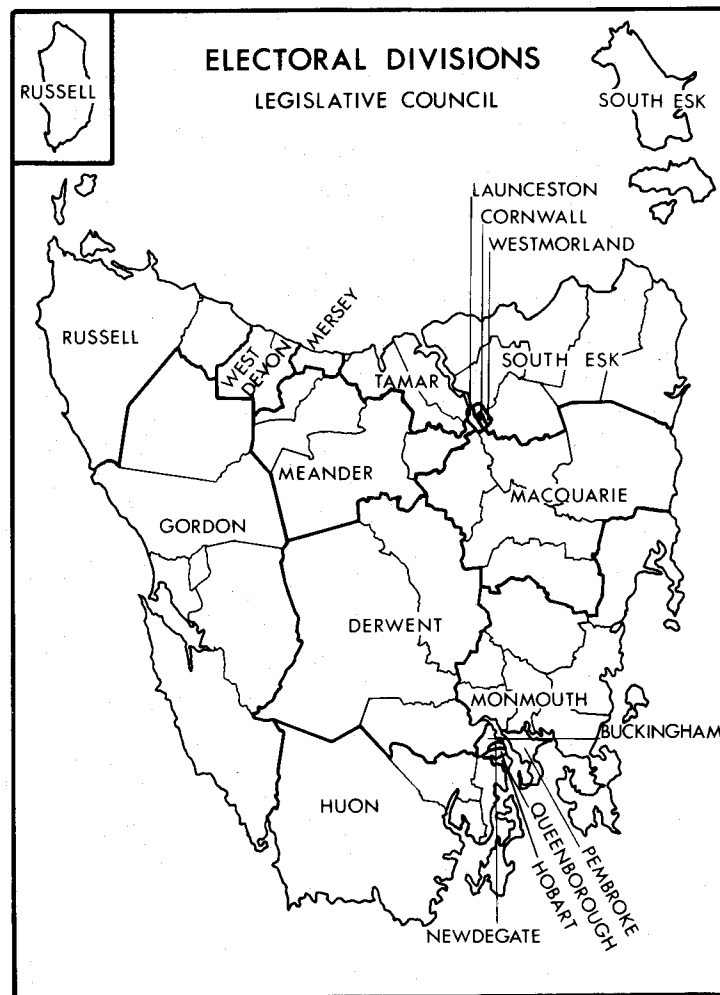
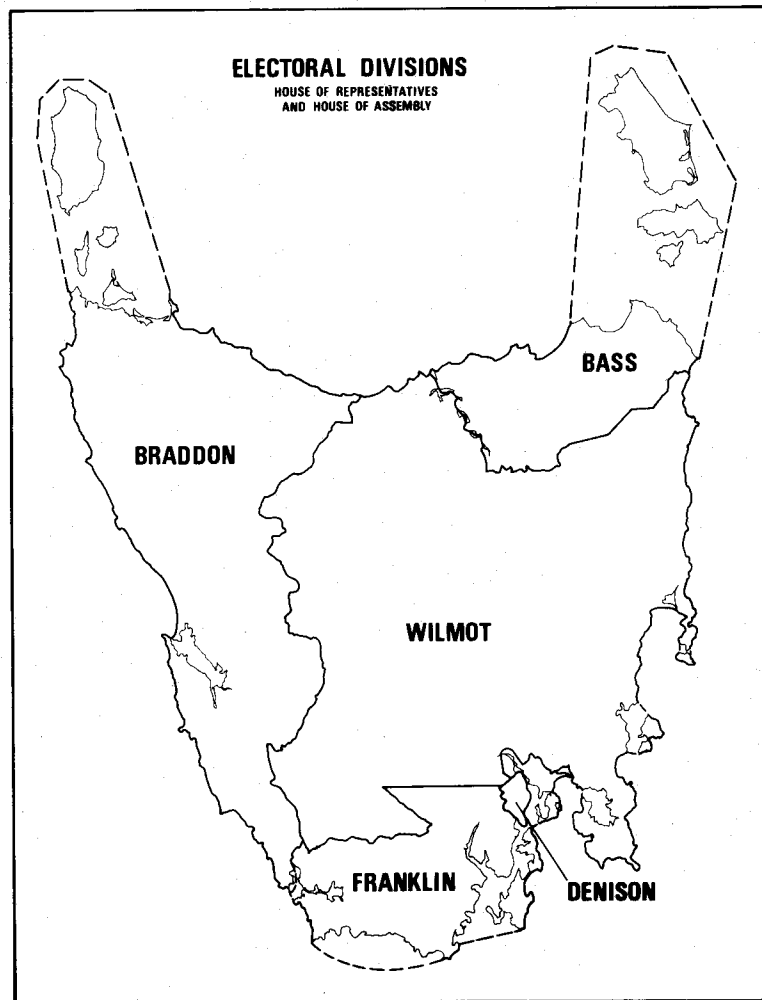
(a) Deputy Premier.

(b) Speaker.

(c) Chairman of Committees.

(d) Premier.

(e) Leader of the Opposition.



### *Sessions of Parliament*

Parliament is required to sit every year and, having risen, must sit again before 12 months have elapsed. When the House of Assembly is dissolved and a general election held, the Governor is required to call Parliament together within 90 days of the dissolution, subject to a discretionary extension of a further 30 days.

### **The Legislative Council**

#### *Annual Fractional Elections*

For the purpose of electing members of the Legislative Council, the State is divided into 19 single-member constituencies. Each member, when elected, holds office for six years and Council elections are held every year to elect three members; every sixth year four members are elected. There are no general elections for the Legislative Council.

#### *Preferential Voting*

An amendment to the *Electoral Act* 1907 in 1980 changed the method of determining the positions of candidates' names on ballot papers. Previously the order of candidates' names was determined by ballot. (Prior to a 1973 amendment to the *Electoral Act*, candidates' names appeared in alphabetical order). The 1980 amendment, however, introduced a system of 'rotating ballot papers' for both Houses. This provides that there shall be different batches of ballot papers on which candidates' names are placed in different positions. Although the system does not provide for all possible permutations, it ensures that all candidates are given an equal opportunity to share in the assumed benefit attaching to being placed in the first two and the last two positions on a ballot paper. If there are two candidates, the voter need only vote for one. If there are three or more candidates, the voter must indicate at least three preferences to record a valid vote. Unlike ballot papers for House of Assembly elections, candidates' names on Legislative Council papers are not grouped to show party allegiance, nor is there any indication whether or not a candidate belongs to a political party.

If any candidate secures first-preference votes exceeding half the total first preferences, he is declared elected. If no candidate satisfies this condition, then the candidate with the least votes is excluded and the second preferences shown on his voting papers are transferred to other candidates, the transfer value of each such second preference being equal to one. If no candidate then has the required majority, the process of exclusion is repeated until such time as one candidate secures the majority.

The method of counting is identical with that used in elections for the federal House of Representatives and is termed preferential. The full description is election by absolute majority through use of the alternative vote.

#### *By-Elections*

In the case of a vacancy occurring in the Legislative Council, a writ is issued directing that an election be held to fill the vacancy. There is no provision for a re-count of voting papers of the vacating member as for the House of Assembly.

#### *Status of Legislative Council*

The Legislative Council has the tradition of being a non-party house; in 1980 the composition of the house was 16 independents and three Labor Party representatives. The leader for the Government in the Legislative Council cannot rely upon a vote taken on party lines to ensure the passage of any government bill. It is the ability to command a majority in the House of Assembly which gives a party the right to form the government of the day and which ensures the passage of government legislation through the lower house; no such certainty exists in the passage of bills through the upper house.

Following conflict between the two Houses of Parliament over a money bill during 1924 and 1925, the *Constitutional Amendment Act* 1926 was passed. This Act defined the relations between the two Houses, especially with regard to the passing of money bills. The following current principles are found in the Act:

- (i) the Legislative Council retains the right to reject any bill, including a money bill;
- (ii) the Council is specifically prevented from amending bills to raise revenue for the ordinary annual services of the Government and bills imposing land and income tax;



(iii) it can suggest to the House of Assembly that amendments be made but the adoption or rejection of such amendments is at the discretion of the Assembly; and

(iv) the operation of such bills is restricted to a period of one year.

Apart from the above specific exceptions, the Council retains the right to amend money bills, e.g. those dealing with loan funds or probate. The House of Assembly is given the sole right to initiate bills for the raising of revenue and the imposition of taxes. Finally, the powers of the two houses are declared equal in all matters except for these specific exceptions.

#### *Boundaries, Legislative Council Divisions*

Legislative Council electoral division boundaries, which are shown on an earlier map, have remained unchanged since September 1968. In 1980 the Council established a Select Committee to recommend changes to the boundaries. The following table shows the number of electors in each division as at 30 June for recent years:

**Legislative Council: Enrolments by Electorate at 30 June**

Division (a)	1975	1976	1977	1978	1979	1980
Buckingham (H) .....	14 791	14 940	14 571	15 544	16 076	16 609
Cornwall (L) .....	12 534	11 908	11 961	13 948	13 235	13 236
Derwent (R) .....	7 081	6 985	7 067	6 623	7 438	7 482
Gordon (S) .....	5 586	6 304	6 044	6 607	6 571	6 479
Hobart (H) .....	13 932	13 897	13 554	14 061	13 178	13 261
Huon (R) .....	11 035	11 444	11 507	13 855	13 817	14 300
Launceston (L) .....	11 416	14 284	14 378	14 781	14 092	14 337
Macquarie (R) .....	7 380	7 433	7 607	7 684	7 562	8 246
Meander (R) .....	7 996	7 938	8 694	8 495	8 445	8 709
Mersey (DU) .....	15 495	15 551	16 018	19 346	19 006	19 442
Monmouth (R) .....	10 019	10 422	10 653	11 175	12 001	12 081
Newdegate (H) .....	16 761	17 259	16 635	17 849	17 427	17 051
Pembroke (H) .....	19 363	19 607	24 663	25 617	24 970	24 853
Queenborough (H) .....	12 712	12 694	13 523	13 623	13 505	13 581
Russell (R) .....	12 137	12 253	12 000	12 910	12 796	12 663
South Esk (R) .....	10 162	10 206	10 461	10 855	10 787	12 256
Tamar (R) .....	8 935	9 080	8 932	9 821	11 115	11 101
West Devon (BP) .....	12 990	13 271	14 575	15 134	15 130	15 036
Westmorland (L) .....	11 045	11 385	11 346	11 996	13 530	13 499
Total .....	221 370	226 861	234 189	249 924	250 681	254 222

(a) (H) = Hobart and suburban; (L) = Launceston and suburban; (BP) = Burnie and Penguin municipalities; (DU) = Parts of Devonport and Ulverstone municipalities; (R) = rural; (S) = special.

#### *Legislative Council Members*

The next table shows members of the Legislative Council (following the elections held in the Divisions of Buckingham, Macquarie and South Esk on 24 May 1980), the electoral division which they represent and the year in which each will retire from the Council:

**Members of the Legislative Council, June 1980**

Electoral Division	Member's name	Year of retirement
Buckingham .....	Lowrie, The Hon. Kenneth Francis (a)	1986
Cornwall .....	Le Fevre, The Hon. Vernon McKenzie	1984
Derwent .....	Batt, The Hon. Charles Leo (b)	1985
Gordon .....	Broadby, The Hon. Albert James	1982
Hobart .....	Venn, The Hon. Kathleen J. (b)	1982
Huon .....	Hodgman, The Hon. Peter	1984
Launceston .....	Shipp, The Hon. Raymond William	1982
Macquarie .....	Shaw, The Hon. George Arthur	1986
Meander .....	Coates, The Hon. Jeffrey Allan	1983
Mersey .....	Braid, The Hon. Henry William	1984
Monmouth .....	Bisdee, The Hon. Louis Fenn	1981
Newdegate .....	Miller, The Hon. Brian Kirkwall (b) (c)	1981

## Members of the Legislative Council, June 1980—continued

Electoral Division	Member's name	Year of retirement
Pembroke .....	McKay, The Hon. Peter Charles	1983
Queenborough .....	Hodgman, The Hon. William Clark	1983
Russell .....	Fenton, The Hon. Charles Balfour Marcus (d)	1981
South Esk .....	Archer, The Hon. Richard Clive	1986
Tamar .....	Hope, The Hon. Reginald Charles	1985
West Devon .....	Young, The Hon. William Thompson	1983
Westmorland .....	Gregory, The Hon. Oliver Harold	1985

(a) Chairman of Committees.

(b) Endorsed by the Australian Labor Party; other members are independents.

(c) Leader for the Government in the Legislative Council; Attorney-General, Minister for Health Services and Minister for Immigration and Ethnic Affairs.

(d) President.

## Qualifications of Electors and Members

*Qualifications of Electors, State Elections*

An elector for both the House of Assembly and the Legislative Council is any person, aged at least 18 years, male or female, who has lived in the State for six months continuously, who is natural-born or a naturalised subject of the Queen and whose name is on the electoral roll for an electoral division. (Legislation reducing the voting age to 18 years passed both Houses of Parliament in mid-1973.) Voting has been compulsory since the passing of the *Electoral Act 1928*. Special qualifications which had previously been required for electors of the Legislative Council were abolished on 1 July 1969 following amendments to the *Constitution Act 1934* and the *Electoral Act 1907*.

*Qualifications of Members, State Parliament*

*House of Assembly:* To be eligible for election as a member of the House of Assembly, a candidate must comply with the following conditions: he must either be an elector or be qualified to be an elector for the House of Assembly and resident in Tasmania for five years at any one time or resident for two years immediately preceding the election.

*Legislative Council:* A candidate for the Legislative Council must be an elector or have the qualifications of an elector for the Council; in addition he must meet the residential restrictions imposed on candidates for the House of Assembly.

Persons of unsound mind or in prison under any conviction are barred from voting at elections for either house or from being elected to either house. No person shall be a member of both houses at the one time.

## Salaries of Members of Parliament

Under provisions of the *Parliamentary Salaries and Allowances Act 1973*, a basic rate of pay to members is calculated annually. This basic rate is set as the 'interstate average' of the rates payable to ordinary 'back bench' members of the Legislative Assemblies of New South Wales, Victoria, Queensland and Western Australia and the House of Assembly of South Australia. Calculation of the interstate average is the responsibility of the 'salaries committee' comprising the Government Statistician, Clerk of the Legislative Council and Clerk of the House of Assembly. The committee is required to meet as soon as practicable after 15 June each year and make the necessary calculation. A report on the method adopted to make the calculation and the interstate average is then forwarded to the Auditor-General who may accept the calculation or himself make a calculation replacing that of the salaries committee. Having either accepted the salaries committee's calculation or substituted one of his own, the Auditor-General is required to publish in the *Government Gazette* the appropriate interstate average which then becomes the basic salary for payment of parliamentary salaries and allowances. The basic rate applicable from 1 July 1980 was \$25 949.

**Special Rates Payable in Addition to the Basic Salary (a)**  
(Per Cent)

Particulars	Additional salary payable as proportion of basic salary (b)	Particulars	Additional salary payable as proportion of basic salary (b)
Cabinet—		House of Assembly—	
Premier .....	125	Speaker .....	33½
Deputy Premier .....	85	Chairman of Committees .....	20
Ministerial office .....	70	Leader of the Opposition .....	70
Legislative Council—		Deputy Leader of the	
President .....	33½	Opposition .....	17
Leader of the Government .....	70	Government Whip .....	6
Chairman of Committees .....	20	Opposition Whip .....	6
Deputy Leader of the			
Government .....	11		

(a) The basic salary was set at \$24 106 in July 1979 and raised to \$25 949 from July 1980.

(b) Salary in excess of basic rate (e.g. the Premier receives basic rate + 1.25 × basic rate), i.e. \$58 385 from July 1980).

**Allowances Payable to Members:** Electoral allowances, and entertainment allowances are calculated as a proportion of the base rate. Travel allowances are related to rates payable to permanent heads of State Government Departments. The next table shows the electoral allowances payable as a proportion of the basic salary:

**Electoral Allowances Payable as a Proportion of the Basic Salary (a)**  
(Per Cent)

Electoral division	Proportion of basic salary payable	Electoral division	Proportion of basic salary payable
Legislative Council—		Legislative Council— <i>continued</i>	
Buckingham .....	13	Queenborough .....	11
Cornwall .....	12	Russell .....	26
Derwent .....	18½	South Esk .....	26
Gordon .....	26	Tamar .....	18½
Hobart .....	11	West Devon .....	17
Huon .....	18½	Westmorland .....	14
Launceston .....	12	House of Assembly—	
Macquarie .....	20	Bass .....	26
Meander .....	22	Braddon .....	30
Mersey .....	17	Denison .....	15
Monmouth .....	24	Franklin .....	21
Newdegate .....	11	Wilmot .....	35
Pembroke .....	13		

(a) The basic salary was set at \$25 949 in July 1980.

### The Present System of Government

The system of responsible government in Tasmania requires that the executive power of the State shall be exercised by the Cabinet; in exercising this power, the ministers of the Cabinet are held responsible for the actions and administration of government departments and other governmental authorities which have been created for three basic purposes: (i) to put into practice the laws made by parliament; (ii) to give effect to the decisions of the ministry; and (iii) to advise the ministry on matters of policy.

The next section lists the departments and authorities under the various ministers but the allocation of responsibility is subject to change and Cabinet has the power to vary it at any time. The Cabinet portfolios and responsibilities set out below are those allocated by the Premier following Mr. Batt's resignation from 1 September 1980. A table in the earlier section 'The Cabinet and Executive Government' lists the names of ministers holding the various portfolios.

Cabinet Portfolios and Responsibilities at 1 September 1980

PREMIER, TREASURER AND MINISTER FOR ENERGY	
Premier's Dept Audit Dept Public Service Board Tasmanian Film Corporation	The Ombudsman Treasury Dept Hydro-Electric Commission Directorate of Energy
DEPUTY PREMIER, MINISTER FOR ECONOMIC PLANNING AND DEVELOPMENT AND MINISTER FOR TOURISM AND LICENSING	
Agricultural Bank Tasmanian Government Insurance Office Motor Accidents Insurance Board Premiums Board of Tasmania	Department of Industrial Development Department of Tourism Licensing Board
ATTORNEY-GENERAL, MINISTER FOR HEALTH SERVICES, MINISTER FOR IMMIGRATION AND ETHNIC AFFAIRS	
Attorney-General's Dept Prison's Dept Public Trust Office Registrar General's Dept	Supreme Court and Sheriff's Dept Solicitor General's Dept Department of Health Services Mental Health Services Commission
MINISTER FOR EDUCATION, MINISTER FOR RACING AND GAMING AND MINISTER FOR POLICE AND EMERGENCY SERVICE	
Education Dept State Library Council of Advanced Education University of Tasmania Racing and Gaming Commission	Racing Trust Totalizator Agency Board Police Dept Tasmanian Fire Service State Emergency Service
MINISTER FOR CONSTRUCTION, MINISTER FOR INDUSTRIAL RELATIONS AND MANPOWER PLANNING AND MINISTER FOR THE ARTS	
Division of Construction Department of Labour and Industry Building Industry Contractors Registration Board	Tasmanian Museum and Art Gallery Tasmanian Arts Advisory Board
MINISTER FOR MAIN ROADS AND TRANSPORT AND MINISTER FOR LOCAL GOVERNMENT	
Dept of Main Roads Metropolitan Transport Trust	Transport Commission Division of Municipal Planning
MINISTER FOR PRIMARY INDUSTRY, MINISTER FOR THE ENVIRONMENT, MINISTER FOR FORESTS AND MINISTER FOR WATER RESOURCES	
Dept of Agriculture Dairy Industry Authority Egg Marketing Board Inland Fisheries Commission Fisheries Development Authority Potato Industry Authority Tasmanian Apple and Pear Marketing Authority	Tasmanian Grain Elevators Board Tasmanian Herd Improvement Organisation Department of the Environment Forestry Commission Metropolitan Water Board Rivers and Water Supply Commission North-West Regional Water Authority
MINISTER FOR LANDS, MINISTER FOR NATIONAL PARKS AND WILDLIFE, MINISTER FOR COMMUNITY WELFARE AND CHILD CARE AND MINISTER FOR HANDICAPPED PERSONS' SERVICES	
Lands Dept National Parks and Wildlife Service	Department of Social Welfare
MINISTER FOR HOUSING, MINISTER FOR MINES AND MINISTER FOR RECREATION	
Division of Housing Mines Dept	Division of Recreation
MINISTER FOR PUBLIC HEALTH, MINISTER FOR CONSUMER AFFAIRS AND MINISTER FOR ADMINISTRATIVE SERVICES	
Division of Public Health Consumer Affairs Council Electoral Dept	Government Printer Supply and Tender Dept Royal Botanical Gardens

## OMBUDSMAN

Following passage of the *Ombudsman Act* 1978, an Ombudsman for Tasmania was appointed in mid-1979. The Act came into force on 10 September 1979. Tasmania's first Ombudsman is Mr. C. R. Woodhouse, previously Commonwealth Deputy Commissioner for Taxation in Tasmania, who was appointed for a five-year term.

### *Role and Powers*

The Ombudsman is empowered by the *Ombudsman Act* 1978 and delegation from the Commonwealth Ombudsman to investigate complaints from citizens about administrative acts of State and Commonwealth Government departments, State statutory authorities, prescribed Commonwealth authorities and local government authorities. The Ombudsman, who is appointed by the Governor, is independent of any authority or Minister of the Government. However, Parliament may refer any matter within the Ombudsman's jurisdiction to him for investigation and report. The Ombudsman is answerable to the Parliament of Tasmania. The Ombudsman system provides a free, expeditious and informal means for the ventilation of grievances of citizens who feel aggrieved by administrative decisions or omissions. This involves carrying out impartial inquiries at a high level and making recommendations for the resolution of grievances where appropriate.

The Ombudsman has wide powers under the Act to investigate complaints and to recommend action to correct injustices or unlawful action by government departments and instrumentalities. His investigatory powers include those of a Board of Inquiry referred to in Section 14 of the *Evidence Act* 1910. Fines of up to \$1 000 are provided in cases where persons are found guilty of an offence under the *Ombudsman Act* by not co-operating with the Ombudsman. The Ombudsman has the power to enter and inspect any premises occupied or used by a public authority.

### *Jurisdiction*

A person may complain to the Ombudsman about any decision, act, omission, proposal or recommendation relating to a matter of administration by a Government department, a State or prescribed Commonwealth authority set up by Act of Parliament, or any local government authority or by their officers. The State Ombudsman's jurisdiction is limited by Parliament—it does not extend to: (i) action taken for the purpose of promotion of legislation; (ii) acts of counsel or legal advisers to the Crown or a public authority; (iii) judicial matters or acts; (iv) conditions of service determined under Part V of the *Public Service Act*; (v) matters where a person has a right to review or legal remedy, unless the Ombudsman considers it is not reasonable for that person to resort to such action; (vi) acts of private persons, businesses or companies; or (vii) acts of the Auditor-General. Similar restrictions apply to the Ombudsman's delegated Commonwealth jurisdiction.

### *Complaints*

Any person who considers that he has not been properly or fairly dealt with or who feels he has suffered an injustice as the result of any administrative act of a Government department or authority or any local government authority or their officers may take his grievance to the Ombudsman. The complaint should be made to him by the person directly affected by the administrative act complained of or, if the complainant so wishes, by a Member of Parliament on his behalf or, if the complainant is unable to act for himself, by some other person on his behalf. Corporate or unincorporate bodies may also make complaints.

Complaints may be brought to the notice of the Ombudsman by telephone, personal visit or by letter but it is generally preferable that a complaint be made in writing. There are no forms to fill in but a detailed account of the matter complained about with appropriate references to or copies of any correspondence with the Department, etc. involved, is desirable.

Grievances should be submitted without delay and within two years (State) or one year (Commonwealth) after the cause of the complaint has arisen. It is usually desirable that a person first endeavours to remedy his complaint by direct approach to the department, etc. concerned. If satisfaction is not obtained, he should proceed promptly to lodge his complaint with the Ombudsman.

Conduct of investigations by the Ombudsman is essentially informal. He is not required to hold any formal hearings and he may regulate his procedures as he sees fit. All investigations are conducted in private; privacy of communication of complaints is extended to persons in the care or custody of government institutions. All complainants are informed of the final results of the Ombudsman's investigations.

## ACTS OF STATE PARLIAMENT

### Summary of State Acts, 1979

The examples below illustrate the interpretation of the notations used in the following list of Acts:

(A 1952)—An Act to amend an Act of the same title passed in 1952.

(A Audit Act 1952)—An Act to amend an Act of this title passed in 1952.

(R 1952)—An Act to repeal an Act of the same title passed in 1952.

(R Audit Act 1952)—An Act to repeal an Act of this title passed in 1952.

(P 1952)—An Act to be incorporated and to be read as one with the Principal Act passed in 1952.

(P Audit Act 1952)—An Act to be incorporated and to be read as one with the Principal Act of this title passed in 1952.

(RS 1952)—An Act to repeal an Act of the same title passed in 1952 and to substitute new legislation.

(RS Audit Act 1952)—An Act to repeal an Act of this title passed in 1952 and to substitute new legislation.

Where an Act amends an earlier Act or is to be incorporated and read as one with the Principle Act, the year quoted in brackets (e.g. A 1952) refers to the year in which the Principal Act was passed; all subsequent amendments are inferred.

### State Acts, 1979

Number	Short title and summary
1	Loan Fund Supply—provided \$42 million in Loan Funds for the 1979-80 financial year.
2	Consolidated Revenue Fund Supply—provided \$146 560 000 in Consolidated Revenue Funds for the 1979-80 financial year.
3	Carbide Industry Development (A 1976)—granted power to Treasurer to subscribe to shares in Electrona Carbide.
4	Licensing (A 1976)—several changes made to prerequisites for granting licences to off-licences and clubs. Also made amendments to trading hours, meal permits, proof of age and transfer of licences.
5	Consolidated Revenue Fund Appropriation (No. 2) 1978-79—provided \$110 000 for the initial cost of the Parliamentary Reporting Service.
6	Hospitals (A 1918)—minor changes mainly in respect of hospital boards and committees.
7	Wheat Industry Stabilisation (A 1974)—minor changes to the Act with respect to licensed receivers and wheat prices.
8	Metropolitan Water (A 1961)—minor amendment to section cost of mains extensions.
9	Psychologists Registration (A 1976)—provided for the control of demonstrations of hypnotism and amendments concerning the registration of psychologists.
10	Vermin Destruction (A 1950)—native hens, for the purpose of the original Act, are no longer considered vermin.
11	Acts Reprinting (R Amendments Incorporation Act 1906)—provided for the reprinting of Acts of Parliament, including any subsequent amendments, as directed by the Attorney-General.
12	State Grants Commission (A 1976)—minor change to repeal expiry of Act.
13	Public Authorities (Overseas Borrowing) Act—enabled certain public authorities to raise loans from sources outside the Commonwealth.
14	State Employees (Long-Service Leave) (A 1950)—changed method of calculating long-service leave for State employees.
15	Road Safety (Alcohol and Drugs) (A 1970)—provided for the arrest of persons driving whilst disqualified.
16	Motor Accidents (Liabilities and Compensation) (A 1973)—minor changes to definition of vehicles registered in other states.
17	Traffic (A 1925)—provided for the arrest of persons driving whilst disqualified.
18	Local Government (A 1962)—provided for extending the powers of a corporation with respect to the carrying on of trade undertakings.
19	Racing and Gaming (A 1952)—unclaimed dividends to be put into trust after six months.
20	Building Societies (A 1876)—amendments to allow the amalgamation of building societies and the transfer of commitments from one building society to another.
21	Carbide Industry Development (No. 2)—provided for increasing the amount the Minister may guarantee for repayment of principal money.
22	Queen Victoria Hospital (A 1952)—amendments mainly in relation to the constitution of the Board and its role.

## State Acts, 1979—continued

Number	Short title and summary
23	Mining (A 1929)—provided for increases in rents for certain mining leases and increases in certain licence fees.
24	Mount Read and Rosebery Mines Limited Leases (A 1916)—provided for increased rents and fees for leases and licences.
25	Fire Brigades (A 1977)—expiry of Act extended to 30 June 1980.
26	Tasmanian Film Corporation (A 1977)—provision for Government guarantee of repayment of principal up to \$2 million.
27	Ambulance (A 1977)—extended operation of Act until 31 December 1979.
28	Stanley Cool Stores (A 1945)—increased borrowing powers of the Stanley Cool Stores' Board.
29	Law Reform Commission (A 1974)—increased the functions of the Law Reform Commission and provided that the Commission furnish advice to the Attorney-General on certain matters.
30	State Advances (A 1935)—increased powers of the Agricultural Bank of Tasmania to acquire, hold and dispose of property. It also enabled the Treasurer to provide guarantees in respect of advances made to persons in certain rural industries.
31	Law Reform Commission (No. 2) (A 1974)—provided for remuneration and allowances payable to the Chairman of the Commission.
32	Statutory Salaries—outlined salaries and allowances to be paid to the holders of certain official positions.
33	State Employees (Long Service Leave) (No. 2)—further provision with respect to long service leave of State employees who, at the time of retirement, have not exhausted their long service leave requirements.
34	Industrial Safety, Health and Welfare (A 1977)—amendment to powers of authorised officers and offences in relation to industrial safety.
35	Fire Service—amalgamation of fire services in the State, and consolidation and amendment to the law relating to preventing and extinguishing fires and protection of life and property from fires.
36	Consolidated Revenue Fund Supply (No. 2) 1979-1980—provision of \$32 444 000 in Consolidated Revenue Funds for the 1979-80 financial year.
37	Carbide Industry Development (No. 3) (A 1976)—further increased the amount the Minister may guarantee for the repayment of principal money and increased the amount the Treasurer may expend in subscription to shares of Electrona Carbide.
38	Sheriff (A 1873)—the sheriff may leave the State without obtaining the Governor's permission.
39	Electoral (A 1907)—provision for the rotation of candidates' names on ballot papers to try to eliminate bias evident with previous alphabetical order system.
40	Consolidated Revenue Fund Appropriation 1979-1980—provision for \$240 718 029 out of Consolidated Revenue for 1979-80.
41	Consolidated Revenue Fund Appropriation (No. 2) 1979-1980—provision of a further \$4 million out of Consolidated Revenue.
42	Loan Fund Appropriation 1979-1980—authorised \$120 343 263 to be issued out of the Loan Fund.
43	Consolidated Revenue Fund Supplementary Appropriation 1978-1979—appropriation of a further \$16 065 489 from Consolidated Revenue.
44	Criminal Code (A 1924)—crime for a person to light a fire with intent to injure a person or property.
45	Bills of Sale (A 1900)—increased the fees for bills of sale.
46	Industrial Relations (A 1975)—amendment with respect to the terms and conditions of service of the Chairman, Deputy Chairman and Assistant Deputy Chairman of Industrial Boards.
47	Rural Adjustment (A 1977, R Farmers' Debt Adjustment 1936, 1938 and 1971)—powers of the Rural Reconstruction Board.
48	Supreme Court (A 1959)—revived the office of the Assistant Deputy Registrar of the Supreme Court.
49	Trustee (A 1898)—provision for the Trustee to invest trust money in the short-term money market.
50	Local Government (No. 2)—provision for the appointment of Special Commissioners for Town and Country Planning.
51	Hairdressers' Registration (A 1979)—changed the name of the 'Hairdressers' Advisory Board' to 'Hairdressers' Registration Advisory Board' and changed the constitution of the Board.
52	Supreme Court Civil Procedure (A 1932)—prescribed a minimum period for each sitting of a Full Court.
53	Filled Milk (A 1960)—minor amendment concerning the membership of the advisory committee appointed under the Act.
54	Land Tax—fixed the scale of land tax in respect of the 1979-80 financial year.
55	Land and Income Taxation (A 1910)—provision for rebates on certain residential properties.
56	Consumer Affairs (A 1970)—enabled the Consumer Affairs Council to negotiate and resolve matters affecting the interests of consumers.
57	State Advances (No. 2) (A 1935)—enabled the Agricultural Bank of Tasmania to attain prime lender, non-shareholder status with the Primary Industry Bank of Australia.
58	Apprentices (A 1942)—amendment concerning the length of term of membership and reappointment to the Apprenticeship Commission.
59	Long Service Leave (A 1976)—clarified the entitlement to long service leave of those State employees whose employment is on other than a full-time basis.

## State Acts, 1979—continued

Number	Short title and summary
60	Litter (A 1973)—increased the penalties for littering and provided for the appointment of authorised officers by the Director of Environmental Control.
61	Public Servants' Retiring and Death Allowances (A 1925)—further provision in respect of the retirement or death of public servants of certain classes.
62	Constitutional Powers (Coastal Waters)—requested the Federal Parliament to enact an Act to extend the legislative powers of the States in relation to coastal waters.
63	Hydro-Electric Commission (A 1944)—conferred additional powers on the Minister in relation to the Hydro-Electric Commission.
64	Hospitals (No. 2) (A 1918)—contracts over \$2 000 let by hospital boards to be by public tender.
65	Ambulance (A 1977)—minor changes concerning membership of the Interim Ambulance Authority.
66	State Employees (Long Service Leave) (No. 3) (A 1950)—repealed the amendment (No. 2) to the Act made earlier in 1979 (No. 33).
67	Dairy Industry (A 1976)—minor changes to the duties of the Chairman of the Dairy Industry Authority.
68	Builders Registration (A 1977)—validated the grant of registrations and certificates under the Builders Registration Act.
69	Crimes (Offences at Sea)—outlined the extent to which the State's criminal laws were applicable to crimes at sea.
70	Constitutional Powers (Tasmania)—request to the Federal Parliament to enact an Act to remove certain restrictions on the exercise of legislative power by the Tasmanian government.
71	Fire Service (A 1979)—minor changes to conditions of service of officers.
72	Retirement Benefits (A 1970)—minor amendment with respect to the investment of the funds of the Retirement Benefits Fund Board.
73	Racing and Gaming (No. 2) (A 1952)—made further provision with respect to proceedings relating to illegal betting.
74	Statutory Salaries (A 1979)—minor amendment concerning allowances payable to the Auditor-General.
75	Consolidated Revenue Fund (No. 3)—application of \$193 000 out of Consolidated Revenue for the Parliamentary Reporting Service for 1979-80.
76	Traffic (No. 2) (A 1925)—provided for the appointment of a deputy chairman to the Public Vehicles Licensing Appeal Tribunal. It also extended the power to postpone the commencement of a period of disqualification of a driver's licence and enabled authorised officers of the Transport Commission to serve infringement notices.
77	Parliamentary Privilege (A 1898)—made further provision for the appointment and terms and conditions of service of officers of Parliament.
78	Electoral Amendment (No. 2) (A 1907)—several amendments but the most important change concerned the declaration of an election void. If the election of two or more members in a division is declared void then the whole election of that Division must be declared void and it is necessary to hold a by-election for the entire Division.
79	Local Government (Rates and Charges Remissions) (A 1977)—further provisions with respect to the eligibility of certain pensioners to have their rates and charges remitted.
80	Audit (A 1918)—general revision with respect to the terms and conditions of service of the Auditor-General and Deputy Auditor-General and a general modernising of regulations.
81	Tasmanian Government Insurance (A 1919)—amendment to Act concerning the re-insurance of risks arising outside the State.
82	Local Government (No. 3) (A 1962)—reconstituted the Municipal Commission.
83	Motor Accidents (Liabilities and Compensation) (No. 2)—provided for a lump sum payment in place of weekly allowance benefits on the death of a person with dependants.
84	Wheat Marketing—regulated the marketing of Tasmanian Wheat.
85	Public Service (A 1973)—minor amendment with respect to making awards.
86	Parliamentary Salaries and Allowances (A 1973)—amendment concerning the payment of salaries to Members of Parliament.
87	Wheat Quotas (A 1969)—minor amendment.
88	Parliamentary Superannuation (A 1973)—amendment with respect to superannuation pensions payable to Members of Parliament.

## Further References

## ABS Publication

Year Book, Australia (1301-0) (normally annual, 1979 issue released September 1979, 730 pp.)

## Other Publications

Acts of the Parliament of Tasmania (annual, Tasmanian Government Printer, Hobart)

Tasmanian Statutes 1826-1959 (Consolidated reprint) (Tasmanian Government Printer, Hobart, 1960-1967)

The Tasmanian Almanac (published annually by Mercury-Walch, Hobart)

TOWNSLEY, W. A. *The Government of Tasmania* (University of Queensland Press, 1976)



## Chapter 4

### LOCAL GOVERNMENT

#### HISTORICAL

##### Structure

##### *Introduction*

In Tasmania, the functions of local government are more restricted than in some other countries as the State Government takes direct responsibility for important services such as the police, education, housing, public transport, etc. This peculiarity is not confined to Tasmania and is encountered in the other Australian States, where central control is exercised over functions often delegated to local government authorities in overseas countries; the origin of this tendency probably lies in early colonial history when the continent was virtually empty but the apparatus of government existed at each of the new coastal settlements (Sydney, Hobart, Perth, Melbourne, Adelaide and Brisbane, in order of age). In the Australian situation strong central administrations came first. Local government was a much later growth, the initiative for its creation often coming from the central administration itself in the respective colonies.

The first division of Tasmania into local administrative districts occurred in 1827 when the Colony was split into nine police districts; each district was under the control of a magistrate whose functions were primarily disciplinary and connected with administering the convict system. From then, the development of local government in Tasmania followed three distinct phases as outlined below.

##### *Tasmanian Cities*

From 1835 to 1857 several acts were passed relating to the local government of Hobart and Launceston—Hobart Town was granted elected commissioners in 1846, and under an Act of 1852, both Hobart and Launceston were given elected municipal councils. In 1857 the City of Hobart was incorporated as was the Town of Launceston one year later. Launceston was proclaimed a city in 1888. For the next 76 years these were the only two cities in the State. In 1964 the number was increased to three when Glenorchy was granted city status and in 1981 Devonport was also proclaimed a city.

The form of local government in Hobart and Launceston is governed by separate corporation Acts for each authority; in the cases of Glenorchy and Devonport, however, their operation as cities is provided for in the *Local Government Act 1962*.

##### *Rest of State before 1906*

The first step towards the creation of rural municipalities came with the *Rural Municipalities Act 1858*. Between 1860 and 1863, 16 municipalities had been proclaimed but the nine police districts were also retained under magisterial control. The Act of 1858 was repealed in 1865 and a new *Rural Municipalities Act* became law. The State was then divided into thirty municipal districts with defined boundaries. However, only 19 of these actually had councils. One more district was added in 1880. The City of Hobart and the Town of Launceston were exempted from the Act.

By 1906 there were, in addition to the city councils for Hobart and Launceston and the municipal district councils, many boards and trusts in Tasmania created for specific local government purposes. These had been formed in respect of water, drainage, roads, rabbits, health, fruit, recreation grounds, schools, works and other matters. There were in existence 105 road trusts, 19 rural municipalities, 23 town boards and 2 city councils; a total of 149 local authorities.

### *Rest of State after 1906*

The *Local Government Act 1906* abolished all rural municipalities, town boards, water trusts, main road districts, etc. and replaced them with municipalities which took over the administration of all the local government functions previously administered by the numerous local bodies. Section 10 of the Act provided that a commission should divide the State into not more than 60 districts to be later proclaimed municipalities. The commission reported in 1907 and recommended that the State be divided into 50 municipalities. These did not include the cities of Hobart and Launceston which were governed respectively by the *Hobart Corporation Act 1893* and the *Launceston Corporation Act 1894*. The above recommendations were carried into effect by proclamation of the 50 municipalities. Subsequently, three of the municipalities were amalgamated—Queenborough and New Town with Hobart, and Invermay with Launceston. Glenorchy became a city in 1964 and Devonport in 1981. Hence there are 45 municipalities and four cities in existence at the present time. Apart from the enlargement of Hobart and Launceston caused by the above amalgamations, the boundaries are still substantially the same as those proclaimed in 1907, although there have been numerous relatively minor boundary changes since then.

### **Inquiries into Local Government**

#### *Royal Commission 1938*

A Royal Commission was set up in December 1938 to inquire into and report upon certain aspects of local government in Tasmania. It issued its report on 11 August 1939. Recommendations covered administration and finance, the bases of valuation and assessment, the best form of local government, the number of municipal bodies, wards, the system of rating and co-ordination between municipal and State governments. One of the specific recommendations was that the number of municipal bodies should be reduced to two cities, three urban municipalities and thirty-four rural municipalities. However, this recommendation was not implemented.

#### *Select Committee 1960*

On 16 November 1960, a select committee of the House of Assembly was appointed to inquire into and report on local government. One of its terms of reference was 'whether amalgamation of certain municipalities would be of advantage to local government administration by creating greater efficiency and cutting down administrative costs'. It made its report on 1 August 1961. In relation to the above term of reference, the Committee recommended that it was essential that there be a reduction in the number of municipalities in Tasmania and that to achieve this all boundaries should be reassessed as a matter of urgency by qualified experts, having regard to geographic, economic and population conditions.

#### *Municipal Commission 1962*

In 1962 the *Local Government Act* was passed; this statute repealed the *Local Government Act 1906* and other legislation relating to local government and consolidated the legislation in one Act. The 1962 Act also included provision for establishment of a Municipal Commission to inquire into and report on local government administration in Tasmania. In 1965 the Commission submitted its report recommending numerous amalgamations and boundary changes. If the changes had been put into effect there would have been two cities and 18 other municipalities. However, as a result of protracted litigation the State Government decided to amend the provisions of the 1962 Act under which the Commission was constituted, the 1965 report was not acted upon and the Commission was disbanded in March 1971.

#### *Municipal Commission 1972*

In 1971 amendments were made to the *Local Government Act 1962* in relation to appointment, functions and powers of a new Municipal Commission. The new Municipal Commission was appointed on 31 May 1972. The terms of reference given to the Commission included investigation of whether there should be creation, abolition, amalgamation or partitioning of any municipality. The Commission presented its completed report to the Minister for Local Government on 28 March 1974. The main recommendations made in the Report are summarised below (a more detailed account of the Report is contained in the 1975 *Year Book*).

**Recommendations:** Extensive amalgamations and boundary re-arrangements of municipalities were recommended. If implemented, the latter proposals would have reduced the number of local government authorities by 14 (from 49 to 35) and extended the boundaries of Launceston City to incorporate most of the urban development around Launceston. The Commission reached the conclusion that the pattern of municipal boundaries in Tasmania was such that there must be some wasteful expenditure and a lower level of efficiency than would be obtained by some re-arrangement of the boundaries.

Release of the recommendations of the Municipal Commission caused an immediate unfavourable reaction in most of the municipalities affected by the proposed boundary changes. In August 1974, the State Parliamentary Labor Party met to consider the Commission's Report and decided that it should not be acted upon. As a result, the Report was not placed before Parliament for consideration.

### BOARD OF INQUIRY, 1978

On 25 July 1978 the Minister for Municipal Planning constituted a board of inquiry to report upon local government in Launceston and related areas. This initiative was taken after no firm acceptances had been made in the preceding years to the Government's invitation that municipalities put forward schemes of voluntary amalgamation.

Membership of the Board of Inquiry comprised Dr. Ralph J. K. Chapman of the University of Tasmania, Chairman, Mr. W. D. Libby of the Federal Department of National Development and Mr. A. C. G. DeGaris, a local government consultant from Victoria.

### Terms of Reference

The terms of reference included the investigation of the financial and economic effects of possible changes, any improvements to the effectiveness of local government likely to result, the inter-relationship between authorities in the area and the State Government, and other matters incidental thereto.

The board's inquiry centred around the eight local government areas in the Tamar Valley, namely: the City of Launceston and the Municipalities of Beaconsfield, Evandale, George Town, Lilydale, Longford, St. Leonards and Westbury. The Board's report, tabled in Parliament in June 1979, recommended that the Tamar Valley would be best served by the dissolution of the existing eight councils and the creation of three new authorities to replace them.

The largest authority (*City of Tamar*) would comprise the existing City of Launceston; the Municipalities of Lilydale and St. Leonards, most of Evandale, the urban areas of Prospect Vale (presently in the Municipality of Westbury), and Riverside including Legana (presently in the Municipality of Beaconsfield). The Municipality of George Town together with most of the Municipality of Beaconsfield and the portion of the Municipality of Westbury north of Sugarloaf Mountain would form the second authority recommended to be named *Municipality of Dalrymple*. The southern authority (*Municipality of Cornwall*) would encompass the Municipality of Longford, that part of the Municipality of Evandale west of the South Esk River and the Municipality of Westbury less the excisions to the City of Tamar and the Municipality of Dalrymple.

The Board further recommended that one northern regional water authority should administer the present water supplies for the area as a whole.

The proposed new city of Tamar is an attempt to endow the City of Launceston with a broader rating base which includes all suburban users of the central business district. Tamar also would make available abundant undeveloped land for housing sub-divisions, industrial estates, etc.

### Action

During the July 1979 State election campaign the Premier, Mr. Lowe, promised action on municipal amalgamation by the Government upon re-election. He specified that the Launceston area would be the first to be considered and foreshadowed similar consolidation on the North-West Coast and elsewhere, depending on circumstances and the willingness to merge of the municipalities involved. Mr. Lowe did not commit himself to the detailed

recommendations of the most recent Board of Inquiry, but referred also to the alternative approaches taken by the succession of preceding inquiries.

In June 1980 the Minister for Local Government, Mr Field, announced that legislation was proposed for the Budget Session that would re-organise local government in the Tamar Valley along the lines recommended in the Chapman Report. He said that Cabinet had deferred consideration of the Chapman proposal for a regional water authority.

A three-man steering committee would be appointed to effect the change from eight municipalities to three. The committee would commence work on 1 September 1980 and it was intended that the new municipalities would come into being on 1 July 1981. It was proposed that legislation to establish the councils would abolish all existing local authorities in the Tamar Valley, establish the boundaries of the three new local government areas, establish the steering committee, and establish three advisory groups and three joint sub-committees (for: boundaries and lands; staff; and finance).

In answer to a strong campaign to prevent amalgamation by Tamar Valley councils the Premier, Mr Lowe, said the Government was determined to press ahead with rationalisation. He claimed that local government had failed to take action itself and claimed overwhelming support from the electorate to institute changes.

## LOCAL GOVERNMENT—PRESENT ORGANISATION

### *Authority and Functions*

The authority for, and the forms of, local government are prescribed entirely by State legislation which has largely been consolidated in the *Local Government Act* 1962. Hobart and Launceston Cities operate under separate corporation Acts but the other authorities, including the Cities of Glenorchy and Devonport, operate under the Act of 1962.

The functions of the municipalities are set out in broad general terms in Section 176 of the *Local Government Act* as:

'A Municipality: (a) may for the welfare and good government of its district and the inhabitants thereof: (i) make by-laws; (ii) undertake, make and maintain works, buildings and services; and (iii) order and dispose the common affairs of its members; and (b) shall cause the Queen's peace to be kept and maintained within its districts.'

Particular authority is given by Section 180 for a council clerk to be a deputy clerk of the peace, registrar of the court of general sessions and clerk of petty sessions in his municipality.

In addition, by certain Acts, the municipalities are given specific responsibilities, e.g. *Health Act*, *Local Courts Act*, etc.

### *Administration of Justice*

This responsibility of the municipality to administer the lower courts of justice in Tasmania would appear to be a carry-over from the very early days of local government when the municipality was also required to provide the police force. In all other states the administration is in the hands of a state department. The process of removing this function from the municipalities should be completed by June 1980 when all local government courts will be administered by the State.

### *Population*

The estimated population of Tasmania's local government areas at 30 June 1979 ranged from as low as 290 in Gormanston Municipality to a high of 49 470 for the City of Hobart. Of the 49 local government areas in the State, eight had populations of under 1 000 (see Chapter 6, Demography, for further details).

### *Electors*

Persons eligible to vote in local government elections consist of owners or occupiers of rateable land who are naturalised British subjects over the age of 18 years. The former categories of spouse elector and ex-serviceman elector have been abolished and are now termed residence-electors and, where formerly enrolled, continue to be included in the Electoral Index. To qualify as a residence-elector, a person must have lived in a municipality for a period of at least six months and be enrolled as an elector for the Legislative Council or House of Assembly in respect of a division or subdivision that includes the whole or a part of that municipality.

In 1972 the *Local Government Act* 1962 was amended and plural voting abolished; an elector may now exercise, at the most, three votes—one in his own right and two on behalf of other persons.

In no Australian state are unnaturalised aliens, who are owner-occupiers, eligible to vote at local government elections; Tasmania is the only state with a provision for aliens to have another person vote on their behalf.

#### *Councillors*

A councillor must be an elector of, and either reside, or carry on business, in the municipality and is subject to disqualification for certain breaches of conduct. The term of office is three years and one-third of the council retires each year. Councils may comprise six, nine, 12 or 15 councillors. The warden, deputy warden and treasurer are elected by the council members on an annual basis. The electors of the City of Hobart elect the Lord Mayor and in Glenorchy and Devonport the electors elect the Mayor. However, the Mayor of Launceston is elected by council members. The office of warden is comparable with that of the mayor of a city or the president of a shire in other states.

#### *Government Intervention*

For any of a number of reasons, the Minister administering the *Local Government Act* may consider it necessary to recommend suspension of the elected councillors and the appointment of a commission, or in certain cases an administrator, to carry on municipal government in a particular municipality.

#### *Cities, Municipalities and Towns*

In Tasmania there are only two categories of local government; a municipality or a city. The Act provides for the establishment of towns and indicates requirements before such towns are proclaimed but these are not municipal administrative units. Generally an area is proclaimed as a town to bring into action certain provisions relating to rating and building requirements. Before a municipality can petition for a town to become a city, the town must have had, for five years before the petition, an average population of not less than 20 000.

Other than this population requirement for a city there are no provisions, such as exist in some of the other states, for enlarging or diminishing the status of municipalities to accord with increasing or decreasing population.

## **FINANCE**

### **Introduction**

For local government purposes Tasmania is divided into 49 areas, comprising 45 municipalities and the Cities of Hobart, Launceston, Glenorchy and Devonport. There are no unincorporated areas.

Local government finance statistics in Tasmania are compiled by the Australian Bureau of Statistics from annual local government accounts. Under section 329 of the *Local Government Act* 1962 each local government authority has to submit its accounts annually to the Auditor-General. Copies of these accounts are also made available to the Bureau.

Accounts are compiled by all municipalities except Kingborough on a cash receipts and payments basis, and two basic types of accounts are distinguished, namely revenue and loan accounts. The Cities of Hobart, Glenorchy and Launceston and the Municipality of Kingborough submit accounts on an income and expenditure basis but they are analysed to show cash receipts and payments to assist comparison with other local government areas.

The term 'local government' is employed only in relation to the municipalities and city corporations. Details of semi-government authorities concerned with water supply appear in a later section of this chapter; such authorities provide bulk water but reticulation and sale to householders remain local government functions. Since 1961 the Metropolitan Water Board has incurred loan debts which, under earlier arrangements, would have been entered as the water loan debts of Hobart, Glenorchy, Clarence and Kingborough local government authorities.

### Total Receipts and Payments

The following table shows total receipts and payments of the Tasmanian municipalities and cities for recent years:

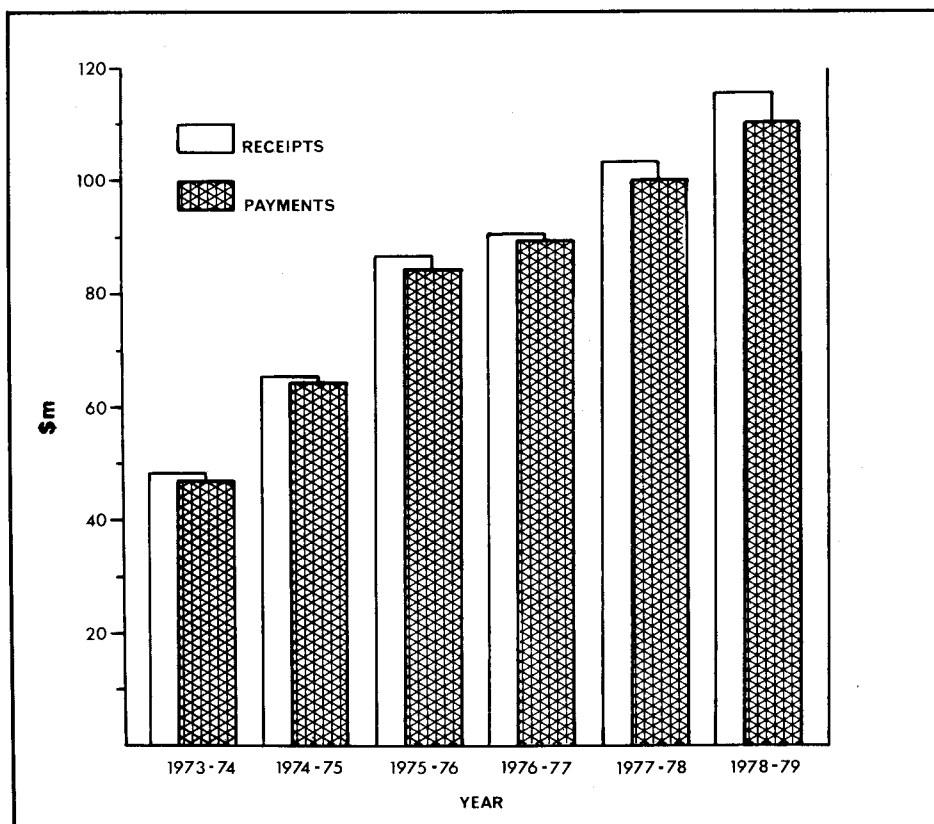
**Local Government Authorities, Tasmania**  
**Total Receipts and Payments: All Funds**  
 (\$'000)

Year	Receipts			Payments			Surplus (+) or deficit (-)
	Revenue accounts <i>r</i>	Loan accounts ( <i>a</i> )	Total <i>r</i>	Revenue accounts <i>r</i>	Loan accounts	Total <i>r</i>	
1973-74	38 981	<i>r</i> 9 529	48 510	38 381	<i>r</i> 8 776	47 157	<i>r</i> +1 353
1974-75	51 898	<i>r</i> 13 640	65 538	51 830	<i>r</i> 12 625	64 455	<i>r</i> +1 083
1975-76	68 381	<i>r</i> 18 470	86 851	65 118	<i>r</i> 19 427	84 545	+2 306
1976-77	76 376	19 553	95 929	69 204	20 579	89 783	<i>r</i> +6 146
1977-78	82 607	21 187	103 794	77 476	23 135	100 611	<i>r</i> +3 183
1978-79	92 130	23 431	115 561	86 286	24 120	110 407	+5 154

(a) Includes loan raisings, sales, capital grants received, etc.

The following graph summarises receipts and payments over recent years:

**Local Government Authorities, Tasmania: Total Receipts and Payments**



### Revenue of Local Government Authorities

The largest proportion of local government revenue comes from rates (40 per cent in 1978-79) which are direct charges on owners of property.

After rates, the next most important sources of revenue are: (i) loan raisings; (ii) government and semi-government grants; and (iii) charges for public works and services. The next table shows the total annual receipts by all municipalities and cities, for a three-year period, classified according to source.

Composition of Total Receipts of Tasmanian Municipalities  
(\$'000)

Source	1976-77		1977-78		1978-79	
	Amount	Per cent of total	Amount	Per cent of total	Amount	Per cent of total
Rates and licences—						
Ordinary services .....	r 32 012	33.4	r 33 873	32.6	35 873	31.0
Business undertakings—						
Water .....	r 8 365	8.7	r 9 582	9.2	11 721	10.1
Sewerage .....	r 6 864	7.2	r 8 033	7.7	9 597	8.3
Total .....	r 47 241	49.2	r 51 488	49.6	57 191	49.5
Grants (a)—						
General purpose .....	4 004	4.2	5 290	5.1	5 741	5.0
Specific purpose—						
Roads .....	r 4 871	5.1	r 5 681	5.5	6 209	5.4
Other ordinary services .....	r 3 668	3.8	r 3 054	2.9	3 460	3.0
Business undertakings—						
Water .....	r 1 668	1.7	r 1 903	1.8	2 851	2.5
Sewerage .....	589	0.6	r 513	0.5	473	0.4
Total specific purpose .....	r 10 796	11.3	r 11 151	10.7	12 993	11.2
Total all grants .....	r 14 800	15.4	r 16 441	15.8	18 734	16.2
Other Revenue Fund receipts (b)—						
Ordinary services .....	r 7 931	8.3	r 8 686	8.4	9 509	8.2
Business undertakings—						
Water .....	r 999	1.0	r 1 115	1.1	1 366	1.2
Sewerage .....	r 568	0.6	r 641	0.6	844	0.7
Abattoirs .....	1 784	1.9	1 764	1.7	1 236	1.1
Other receipts (c) .....	r 4 208	4.4	r 3 506	3.4	5 538	4.8
Total other revenue fund receipts .....	r 15 490	16.1	r 15 712	15.1	18 493	16.0
Other Loan Fund receipts—						
Loans—						
Ordinary services .....	8 954	9.3	12 350	11.9	13 179	11.4
Business undertakings—						
Water .....	2 037	2.1	769	0.7	1 796	1.6
Sewerage .....	6 894	7.2	r 5 476	5.3	4 897	4.2
Other receipts (d)—						
Ordinary services .....	r 245	0.3	r 568	0.5	951	0.8
Business undertakings—						
Water .....	r 104	0.1	r 566	0.5	200	0.2
Sewerage .....	r 167	0.2	r 424	0.4	123	0.1
Total other loan fund receipts .....	r 18 401	19.2	r 20 153	19.4	21 146	18.3
Total ordinary services .....	r 65 893	68.7	r 73 008	70.3	80 460	69.6
Total business undertakings .....	r 30 037	31.3	r 30 786	29.7	35 102	30.4
Total receipts .....	r 95 929	100.0	r 103 794	100.0	115 561	100.0

(a) Comprises all grants; i.e. grants for recurrent and capital purposes.

(b) Excludes rates and grants which are shown separately.

(c) Includes additions to sinking funds, interest earnings, net deposits, donations and tolls.

(d) Comprises sales of materials credited to loan funds, recoveries of capital expenditure, etc. but excludes capital grants which are included in the total grants figures.

### Rates

Under the *Local Government Act 1962*, rates may be based on assessed annual value (i.e. the gross annual income, at the time of valuation, that the person owning the land might obtain by letting the land and its fixtures to a tenant), unimproved value (i.e. value of land only), the capital value (i.e. value of land plus improvements), or upon a composite value incorporating the unimproved value plus some arbitrary proportion of the value of improvements.

In Tasmania, it has been usual for rates to be based on annual values despite isolated and unsuccessful campaigns in favour of taxing on unimproved value only. In estimating annual value, the valuer is taking into account not only the land but also the improvements (e.g. buildings) so there is, in fact, a close relationship between movements in the total capital value of any property and movements in its assessed annual value. The *Land Valuation Act 1971* consolidated and amended the law relating to land valuation.

### System of Valuation

The valuation of property is carried out by a State Government authority, the Land Valuation Branch. Its valuations form the basis of two distinct taxes: (i) land tax collected by the State; and (ii) rates collected by local government authorities on the basis of assessed annual values.

Until 1975-76, land tax was based on the unimproved value of land. The *Land Valuation Act 1971* set up the mechanism by which the basis could be changed to 'land value', being the capital value of the land in its present state but excluding the value of buildings and other artificially established improvements. For a complete definition of 'land value', reference should be made to the Act.

Since it is impossible to completely revalue all properties within the State in the course of a single year, revaluation is carried out on a rotational basis, e.g. St Leonards, New Norfolk and Lilydale were valued in 1971 and again in 1976.

Tasmania is the only state which uses the *assessed annual value* system of rating properties in all local government areas. In New South Wales and Queensland, site value rating is used almost exclusively and the majority of all local government authorities in Australia make use of the site value of property in determining at least part of their rates. Under site value rating, rates are based on the site (unimproved land) value of properties only, whereas under the assessed annual value system of rating, rates are based on a notional earning capacity of properties.

The following table shows the total value of all properties in the State and gives individual details for local government authorities with a total capital value exceeding \$30m at 1 July 1979:

Value of Properties: Principal Local Government Authorities at 1 July  
(\$ Million)

Local Government authority	Year of revaluation (a)	Total capital value		Assessed annual value		Land value (b) 1979
		1978	1979	1978	1979	
Hobart .....	1979	570.76	1 278.92	39.77	83.57	380.26
Glenorchy .....	1978	576.54	590.07	39.17	40.09	186.82
Clarence .....	1979	293.08	589.92	17.79	35.17	199.97
Launceston .....	1975	315.92	321.64	25.85	26.22	97.73
Devonport .....	1977	285.46	301.30	17.36	18.27	83.77
Kingborough .....	1977	232.98	246.13	12.04	12.92	93.25
Beaconsfield .....	1979	75.54	192.40	4.66	10.64	70.20
Burnie .....	1975	168.38	175.88	10.60	10.98	61.34
Ulverstone .....	1979	69.81	173.94	3.93	9.64	62.79
St. Leonards .....	1976	142.66	150.84	9.73	10.23	34.84
Wynyard .....	1977	110.35	114.05	5.88	6.07	40.59
George Town .....	1977	106.40	109.23	6.67	6.83	23.04
New Norfolk .....	1976	100.15	101.51	5.48	5.57	18.75
Brighton .....	1978	92.06	98.09	4.53	4.88	38.88
Longford .....	1979	34.20	89.71	1.86	4.83	37.89
Circular Head .....	1978	86.99	87.71	4.42	4.46	33.98
Sorell .....	1977	78.45	83.97	3.86	4.16	33.01



**Value of Properties: Principal Local Government Authorities at 1 July—continued**  
(\$ Million)

Local Government authority	Year of revaluation (a)	Total capital value		Assessed annual value		Land value (b) 1979
		1978	1979	1978	1979	
Westbury .....	1978	78.28	82.59	4.25	4.50	32.31
Lilydale .....	1976	73.19	75.61	4.68	4.83	21.72
Scottsdale .....	1977	57.58	59.23	2.90	2.99	21.39
Latrobe .....	1976	56.72	58.89	2.94	3.05	21.29
Penguin .....	1979	23.00	58.31	1.22	3.01	20.72
Kentish .....	1978	49.67	50.19	2.41	2.43	21.53
Deloraine .....	1976	42.45	43.08	2.04	2.06	16.85
Portland .....	1978	36.53	37.22	1.95	1.98	15.51
Esperance .....	1978	35.55	35.76	1.70	1.71	11.04
Evandale .....	1977	33.41	34.66	1.76	1.82	14.83
Oatlands .....	1976	32.54	32.70	1.37	1.38	14.66
Fingal .....	1979	16.47	32.61	0.89	1.71	13.94
Hamilton .....	1977	31.91	32.39	1.44	1.46	15.67
Remaining Municipalities .....	..	334.69	339.63	16.93	17.16	126.59
Total Tasmanian .....	..	4 241.72	5 678.18	260.11	344.62	1 865.19

(a) Latest revaluation effective from 1 July of year shown.

(b) As from 1 July 1976: (i) land tax is levied upon land value and not unimproved value; (ii) unimproved land value is no longer determined.

The table that follows shows the value of property in Tasmania for recent years:

**Total Property Valuation in All Local Government Areas, Tasmania at 1 July**  
(\$ Million)

Year	Total capital value	Unimproved value	Assessed annual value	Year	Total capital value	Unimproved value	Assessed annual value	Land value
1973	1 995.91	511.39	124.61	1976	2 902.51	763.67	185.36	932.08
1974	2 317.03	619.19	147.41	1977	3 531.99	n.a.	218.86	1 155.61
1975	2 570.15	696.26	165.47	1978	4 241.72	n.a.	260.11	1 401.17
				1979	5 678.18	n.a.	344.62	1 865.19

**Rate Collections**

The following table shows details of the rates collected in Tasmania for the latest three-year period available:

**Rates Received (a) by Local Government Authorities, Tasmania**  
(\$'000)

Rate	1976-77	1977-78	1978-79
Ordinary services (b)—			
General .....	r 15 902	r 15 943	15 959
Street lighting .....	r 344	r 414	513
Road .....	r 9 311	r 10 060	r 10 992
Health .....	761	r 843	956
Sanitary and garbage .....	r 852	r 1 010	1 124
Recreation and reserves .....	r 2 451	r 2 806	3 220
Halls and community centres .....	142	176	184
Library .....	315	r 284	248
Fire brigade .....	r 554	r 631	773
Drainage .....	302	362	474
Other .....	102	205	278
Total .....	r 31 036	r 32 734	34 721

**Rates Received (a) by Local Government Authorities, Tasmania—continued**  
(\$'000)

Rate	1976-77 r	1977-78 r	1978-79
Business undertakings—			
Water .....	8 365	9 582	11 721
Sewerage .....	6 864	8 033	9 597
Total .....	15 229	17 615	21 318
Grand total .....	46 265	50 349	56 039
Percentage increase (c) .....	18.9	8.8	11.3

(a) Net of refunds.

(b) Where a single consolidated rate has been charged (e.g. Hobart and Launceston), the collection has been dissected between 'ordinary' and the two 'business undertakings' components but the 'ordinary' component has been entered, without further analysis as 'general'.

(c) Over previous year.

### Grants to Local Government

#### *Background*

In recent years, major developments have occurred in relation to the finances of local government in Australia. The combination of rate structures reaching 'saturation' levels and rising costs of operation, together with increased responsibilities for facilities in areas such as recreation, health, roads, water and sewerage, etc., has led local government throughout Australia to press for general revenue grants from governments to supplement revenue raised from rates. This demand has arisen despite the increasing assistance given in the form of specific purpose grants from both State and Federal Governments.

In 1973 the Commonwealth Parliament passed the *Grants Commission Act 1973* repealing the *Commonwealth Grants Commission Act 1933*. The 1973 Act laid down procedures for local government authorities to apply for financial assistance from the Commonwealth and for such applications to be the subject of inquiry and report by the Grants Commission. It also provided that the grants to the states for local authorities should be provided in such a way as to promote financial equality between local authorities and regional groupings of such authorities.

These arrangements were replaced in 1976 by the tax sharing arrangements described below, and the Grants Commission ceased to be responsible for recommending amounts to be paid to specific local authorities (*Commonwealth Grants Commission Act 1976*).

#### *Local Government Assistance Under The Tax Sharing Arrangements*

The arrangements agreed to in 1976 between the Commonwealth and the states for the sharing of personal income tax collections with local government, and subsequently incorporated in the *Local Government (Personal Income Tax Sharing) Act 1976*, are broadly as follows:

- (i) each year local government in the states will be entitled to a fixed percentage of net personal income tax collections in the previous year;
- (ii) the amount so derived will be divided among the states in specified proportions which are subject to recommendation by the Commonwealth Grants Commission;
- (iii) each state will allocate a minimum of 30 per cent of the assistance among local authorities on a basis which takes into account the respective populations of those local authorities, but which may also take into account the respective sizes and the respective population densities, and any other matters agreed upon between the Commonwealth and the state concerned;
- (iv) the remaining assistance will be allocated among the local authorities, having regard to their respective financial needs, on the recommendation of State Grants Commissions.

In 1979-80 the Act was amended on two occasions. The effect of these amendments was to increase the share of net personal income tax collections allocated to local government in the States from 1.52 per cent to 1.75 per cent of the previous year's collections in 1979-80 and to 2 per cent in 1980-81.

#### *Conditions of Operation*

For 1979-80, the Federal Government allocated \$221.7m to the States for distribution to local governments. The distribution of this amount between the States was made on a percentage basis recommended by the Commonwealth Grants Commission. The following state percentages and amounts were derived under the formula determined by that Commission:

**Federal Grants to Local Government, 1979-80**

State	Percentage of total	Amount of grant ('000)
New South Wales .....	36.4977	80 930
Victoria .....	25.4513	56 436
Queensland .....	16.8606	37 387
Western Australia .....	9.3897	20 821
South Australia .....	8.6010	19 072
Tasmania .....	3.1997	7 095
Total .....	100.0000	221 739

For 1979-80, 30 per cent (\$2.1m) of the Tasmanian allocation (\$7.1m) was distributed on a per head of population basis. The balance (\$5.0m) was distributed by the State Grants Commission as equalisation grants.

#### *Principles for Determining Equalisation Grants*

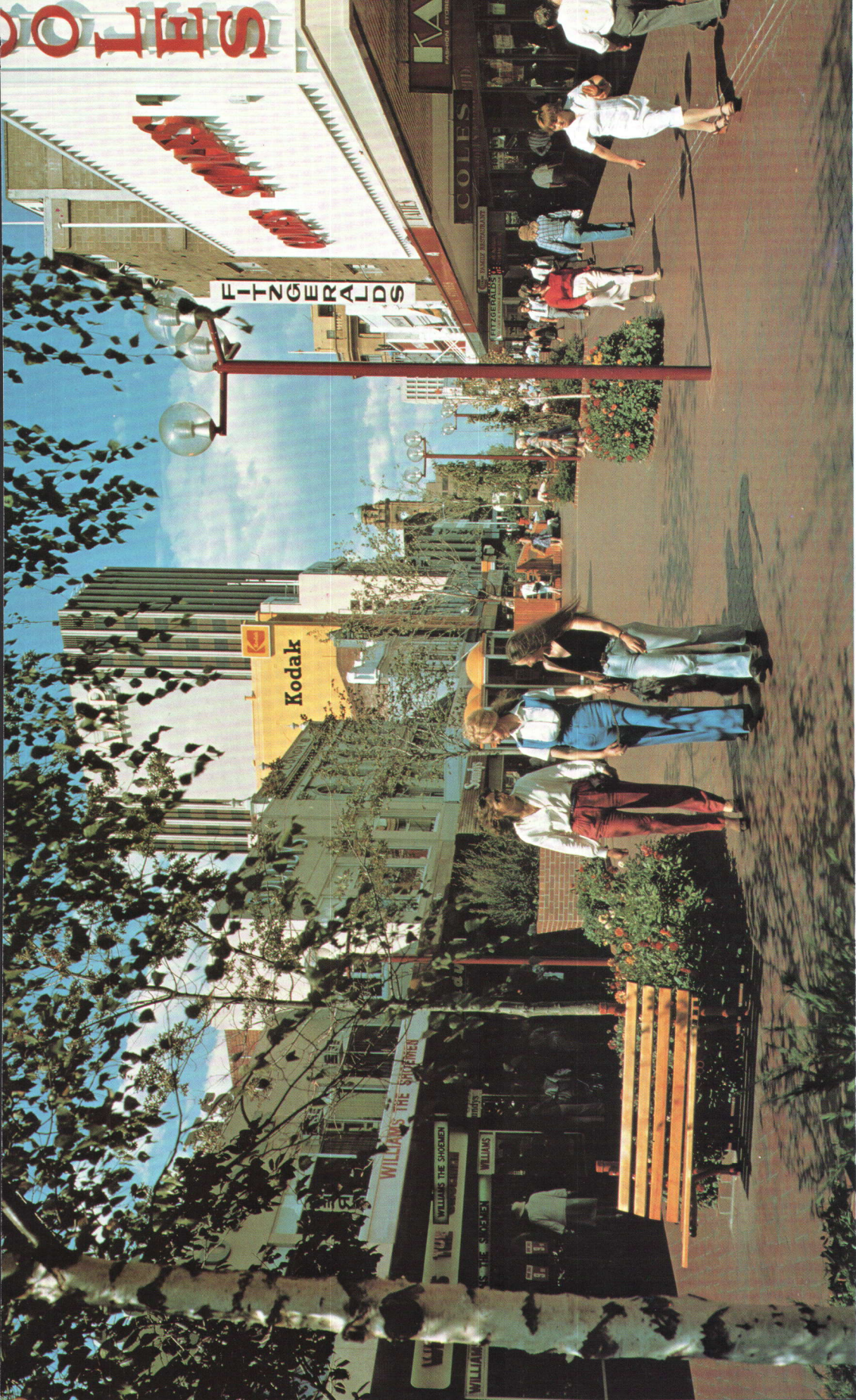
The functions of the State Grants Commission are largely covered by Section 9 of the Act, which sets down certain broad principles to be followed. The fundamental guideline for the determination of grants is set out in Section 9 (2) (d) of the Act. It requires the Commission to ensure that, as far as possible, the grant recommended for a municipality will be an amount which, providing it makes a reasonable rating effort, will enable it to provide services at about the same standard as other municipalities of a similar type. This is viewed as the principle of relative financial need. In determining the grants necessary to equalise the fiscal capacity of municipalities, the Commission has adopted the principle that a grant must basically reflect differences between:

- (i) the revenue-raising capacity of municipalities; and
- (ii) the relative cost of providing services (expenditure differentials).

The Commission has adopted methods to identify and measure those factors which affect relative rateable capacity and the cost of functioning at a given standard. To the extent to which a municipality is below the standard or faced with higher costs, a *prima facie* case exists for an equalisation component.

For 1976-77 the Commission decided that an equal allocation should be made between revenue and expenditure components but, in so doing, included the 'per capita' element (30 per cent) of the funds in the revenue component. The Commission, in 1977-78, re-examined this basis of allocation and came to the conclusion that, overall, it tended to unduly favour larger municipalities. It is now leaning to the view that allocation to revenue and expenditure components should be equal within the amount available for equalisation grants. In order that the impact on any municipality should not be too great, the Commission decided to go only part of the way in 1977-78, 38.4 per cent being for revenue inequalities, and 61.6 per cent for expenditure inequalities. This trend was continued in 1978-79, the allocations for revenue and expenditure inequalities being 45 and 55 per cent respectively. For 1979-80 the Commission deferred a further move to a 50-50 basis but intends to examine the implications of such a distribution prior to the 1980-81 distribution. The next table shows the allocation of federal grants to revenue and expenditure components and the per capita grants portion for the last three years:

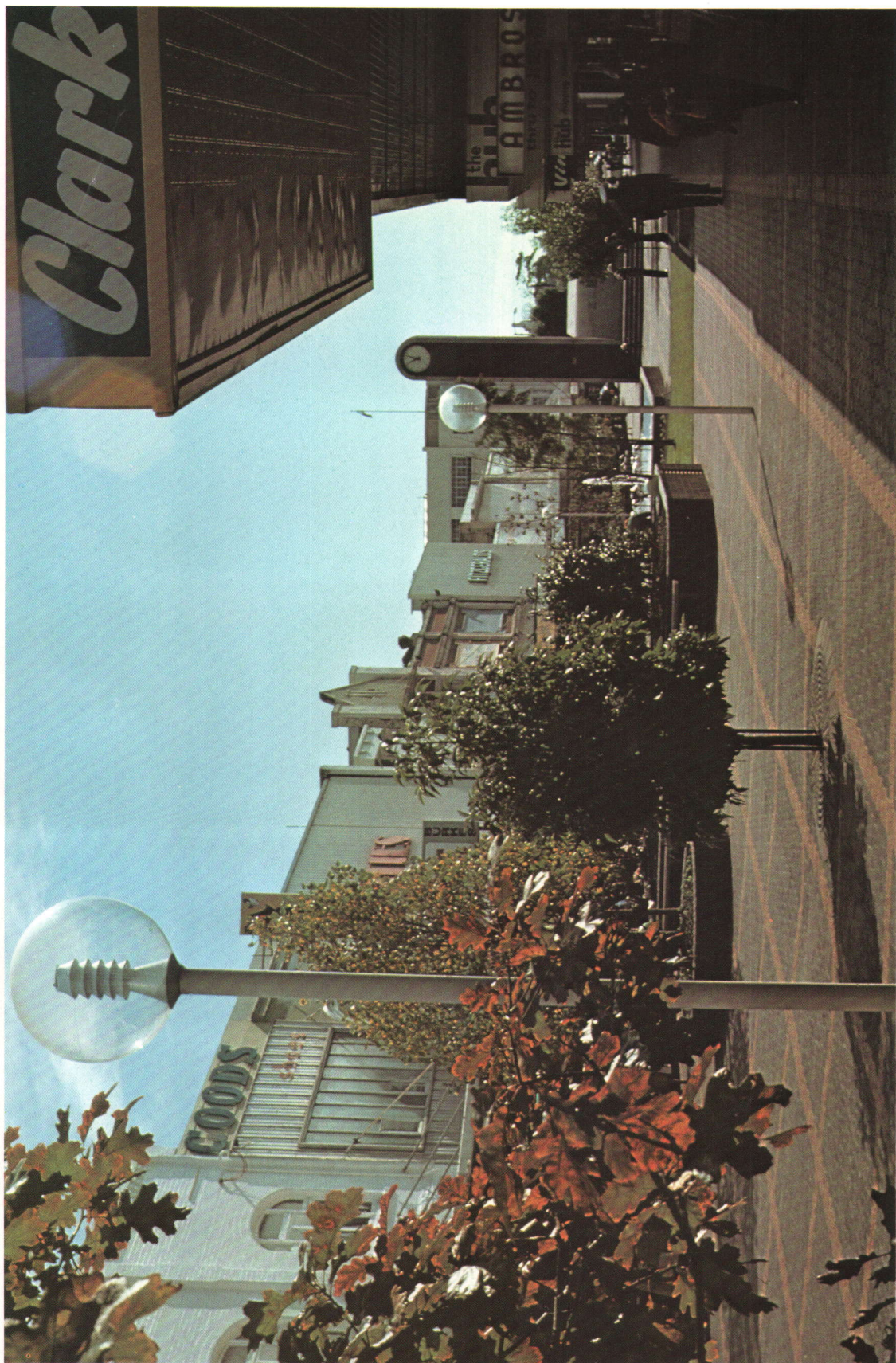




Elizabeth Mall, Hobart

[Tasmanian Film Corporation]





Devonport Mall

**Federal Financial Assistance Grants to Local Government, Tasmania  
(\$'000)**

Allocation	1977-78	1978-79	1979-80
Equalisation grants—			
Revenue disabilities .....	1 422	1 809	2 235
Expenditure disabilities .....	2 281	2 210	2 731
Total .....	3 703	4 019	4 966
Per capita grant .....	1 587	1 722	2 128
Total grant .....	5 290	5 741	7 095

The Commonwealth Grants Commission's only role under the new scheme is to advise of the appropriate percentage distribution of federal personal income tax between the states, and, in the initial period, to provide advice to the state bodies on methods for calculating grants to municipalities.

*Financial Assistance by Grants Commission*

The following table provides details of financial assistance to Tasmanian municipalities from distributions under the revised scheme for 1978-79 and 1979-80:

**Federal Government Financial Assistance to Local Government in Tasmania (a)**

Local government area	1978-79				1979-80			
	Per capita grant	Equalisation grant	Total grant	Per head of population (b)	Per capita grant	Equalisation grant	Total grant	Per head of population (b)
	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$
Beaconsfield .....	54	113	167	r 12.54	69	134	203	14.88
Bothwell .....	4	33	37	44.01	4	39	43	52.77
Brighton .....	24	68	92	14.36	33	83	116	16.34
Bruny .....	1	16	17	54.20	2	21	23	70.78
Burnie .....	82	175	257	r 13.20	100	210	310	15.94
Campbell Town .....	7	29	36	22.52	8	36	44	28.33
Circular Head .....	33	128	161	20.73	40	150	190	24.51
Clarence .....	181	364	545	r 12.44	226	430	656	14.68
Deloraine .....	20	74	94	19.47	25	88	113	23.33
Devonport .....	92	200	292	r 13.26	113	240	353	15.82
Esperance .....	13	57	70	22.32	16	68	84	26.91
Evandale .....	7	30	37	21.85	9	37	46	26.42
Fingal .....	12	62	74	26.51	14	74	88	31.23
Flinders .....	4	45	49	50.12	5	54	59	60.25
George Town .....	29	68	97	13.61	37	85	122	16.81
Glamorgan .....	6	29	35	25.31	7	35	42	30.70
Glenorchy .....	179	232	411	9.65	219	297	516	12.15
Gormanston .....	2	16	18	53.32	2	19	21	71.38
Green Ponds .....	4	23	27	30.99	4	28	32	37.71
Hamilton .....	14	63	77	24.93	16	75	91	31.90
Hobart .....	210	160	370	r 7.46	256	241	497	10.05
Huon .....	21	74	95	19.33	25	89	114	23.35
Kentish .....	17	81	98	24.91	20	94	114	28.92
King Island .....	11	59	70	26.15	14	71	85	31.66
Kingborough .....	62	126	188	r 12.12	80	155	235	14.57
Latrobe .....	24	51	75	13.21	29	76	105	18.16
Launceston .....	138	155	293	9.00	168	218	386	11.92
Lilydale .....	37	106	143	15.98	46	129	175	19.45
Longford .....	23	49	72	13.06	28	65	93	16.65
New Norfolk .....	43	88	131	12.77	53	111	164	15.88
Oatlands .....	9	50	59	26.72	11	62	73	33.38
Penguin .....	21	56	77	15.00	27	72	99	18.88
Port Cygnet .....	9	45	54	25.69	11	54	65	30.99
Portland .....	7	32	39	22.60	9	40	49	27.63

## Federal Government Financial Assistance to Local Government in Tasmania (a)—continued

Local government area	1978-79				1979-80			
	Per capita grant	Equalisation grant	Total grant	Per head of population (b)	Per capita grant	Equalisation grant	Total grant	Per head of population (b)
	\$'000	\$'000	\$'000	\$	\$'000	\$'000	\$'000	\$
Queenstown .....	19	96	115	27.32	22	112	134	32.12
Richmond .....	7	40	47	27.43	9	49	58	33.44
Ringarooma .....	9	55	64	29.01	11	66	77	34.88
Ross .....	2	23	25	46.87	3	28	31	55.97
St Leonards .....	79	163	242	r 12.61	99	195	294	14.98
Scottsdale .....	17	65	82	20.11	21	80	101	24.52
Sorell .....	19	89	108	23.09	24	106	130	27.25
Spring Bay .....	8	45	53	28.90	9	55	64	35.18
Strahan .....	2	23	25	57.69	2	28	30	70.27
Tasman .....	4	35	39	41.92	5	42	47	50.31
Ulverstone .....	52	115	167	r 13.33	65	142	207	16.16
Waratah .....	9	52	61	28.21	11	62	73	32.92
Westbury .....	24	61	85	14.76	30	73	103	17.40
Wynyard .....	50	114	164	r 13.70	62	146	208	17.14
Zeehan .....	23	86	109	18.91	30	102	132	22.23
Tasmania .....	1 722	4 019	5 741	r 13.88	2 128	4 966	7 095	16.99

(a) Excludes grants for specific purposes. Comprises: (i) grants to municipalities on a population basis; and (ii) equalisation grants as determined by the State Grants Commission.

(b) Figures are based on the populations of the municipalities at the beginning of each year.

## Business Undertakings

The classification 'business undertakings' is used in Australian local government finance statistics to include municipal tram and bus services, municipal electricity supply (generation or distribution), municipal water and sewerage schemes, municipal abattoirs, etc. In Tasmanian local government finance statistics, electricity supply ceased to appear as from 1948-49 (the Hydro-Electric Commission is now the sole supplier). Municipal tram and bus services ceased to appear as an item in 1955-56. The Metropolitan Transport Trust acquired the city transport services operating in Hobart, Launceston and Burnie some years ago. Consequently, the only activities under the heading of municipal 'business undertakings' in current Tasmanian statistics relate to water supply, sewerage and abattoirs.

## Loan Receipts

At 30 June 1979 the aggregate loan debt of all local government authorities was \$149 933 500, of which only \$9 563 200 (i.e. 6.4 per cent) was owed to the State Government. The main Tasmanian sources of loans for local government authorities are banks, superannuation and various trust funds, and insurance companies. The cities of Hobart and Launceston also raise loans by public issues.

The next table shows the loan account receipts of all local government authorities:

## Local Government Authorities, Tasmania: Loan Account Receipts (\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Loan raisings for—					
Sewerage .....	4 871	6 607	6 894	5 395	4 897
Road, street and bridge construction .....	2 449	3 536	4 625	6 398	8 298
Water supply .....	831	1 236	2 037	769	1 796
Recreational facilities .....	712	1 369	1 417	1 538	2 147
Other .....	3 397	3 112	2 911	4 414	2 734
Total raisings .....	12 260	15 860	17 885	18 514	19 872



**Local Government Authorities, Tasmania: Loan Account Receipts—continued**  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Government and semi-government grants .....	1 459	1 742	1 232	1 185	2 736
Other receipts (a) .....	274	742	436	1 488	823
Total receipts .....	13 994	18 344	19 553	21 187	23 431

(a) Includes recoveries of capital expenditure, sales of materials credited to loan funds, contributions from the private sector credited to loan funds, etc.

The amount that any local government authority can raise is governed by:

- (i) The difficulty in finding willing lenders.
- (ii) The fact that the approval of the State Treasury is required.
- (iii) The ability of an authority to repay its debt. The *Local Government Act 1962* restricts the total indebtedness of an authority to 10 times its average annual income for the preceding three financial years.

The following table shows, in summary form, loan raisings, loan debt and sinking funds:

**Local Government Authorities, Tasmania: Loan Raisings, Loan Debt and Sinking Funds**  
(\$'000)

Year	Loan raisings during financial year			Loan debt at 30 June			Total of sinking funds at 30 June (c)
	From State Government (a)	From other sources (b)	Total	To State Government	To other creditors	Total	
1973-74 .....	101	8 473	8 574	1 187	88 579	89 766	3 060
1974-75 .....	1 245	10 430	11 675	2 379	95 513	97 892	3 367
1975-76 .....	1 583	14 277	15 860	4 463	105 202	109 665	3 766
1976-77 .....	594	17 291	17 885	4 973	117 977	122 950	4 345
1977-78 .....	1 646	16 868	18 514	6 556	129 729	136 285	5 005
1978-79 .....	2 559	17 313	19 872	9 563	140 370	149 934	5 204

(a) These advances were from the State Treasury direct, and exclude those from authorities such as the Housing Department and the Metropolitan Transport Trust.

(b) Includes advances from the Housing Department and the Metropolitan Transport Trust.

(c) Sinking funds maintained by municipalities and cities for debt redemption purposes.

### Source of Loan Funds

It can be seen from the preceding table that the local government loan debt includes only a small liability in respect of advances made by the State Treasury. However, the proportion of total debt owed to the State Government increased in recent years due to arrangements under the National Sewerage Program, whereby the Federal Government made advances to the State. These funds were then loaned by the State Government to local government authorities. This scheme was phased out at the end of 1976-77.

Debt owed to State authorities (but not directly to the Treasury) has also increased in recent years, principally due to co-operation between individual municipalities and the State Housing Department. In planning the establishment of large housing estates, the Housing Department has been concerned with the provision of certain essential services (e.g. water and sewerage); where such services have required capital expenditure by a municipality, the Department has made some loan funds available.



*Instalment Debentures*

Much of the debt of the municipalities is in the form of instalment debentures which involve equal periodic payments (usually half-yearly); such payments are allocated to redemption and interest in changing proportions as the loan approaches maturity.

**Expenditure of Local Government Authorities***Revenue Fund Payments*

The following table shows annual payments by local government authorities from revenue funds:

**Local Government Authorities, Tasmania**  
**Revenue Fund Payments: Ordinary Services and Business Undertakings**  
**Classified According to Service**  
**(\$'000)**

Payments for—	1976-77	1977-78	1978-79
<b>Ordinary services—</b>			
General administration .....	6 875	r 7 902	7 979
Loan charges—Interest .....	4 509	5 181	6 280
Redemption .....	2 609	3 235	3 807
Sinking fund contributions .....	232	242	296
<b>Total .....</b>	<b>7 350</b>	<b>8 658</b>	<b>10 383</b>
<b>Public works and services—</b>			
Recreational facilities and reserves .....	r 5 611	r 6 341	6 891
Halls and community centres .....	1 043	1 133	1 072
Roads, bridges and street construction .....	r 15 252	r 15 546	17 493
Garbage, sanitary, etc. ....	2 233	2 448	2 755
Health and welfare .....	1 016	r 1 124	1 072
Street lighting .....	752	914	1 043
Parking .....	1 140	1 278	1 170
Private and other works .....	1 679	1 674	1 716
Other .....	r 2 214	r 2 465	3 077
<b>Total .....</b>	<b>r 30 941</b>	<b>r 32 923</b>	<b>36 287</b>
Grants .....	1 843	r 2 164	2 608
Other payments .....	r 2 315	r 2 864	3 714
<b>Total ordinary services .....</b>	<b>r 49 324</b>	<b>r 54 511</b>	<b>60 970</b>
<b>Business undertakings—</b>			
Water supply—			
Loan charges—Interest .....	1 080	1 239	1 294
Redemption .....	775	874	887
Sinking fund contributions .....	30	26	28
<b>Total .....</b>	<b>1 885</b>	<b>2 139</b>	<b>2 211</b>
Other payments (a) .....	r 8 331	r 9 812	11 031
<b>Total water supply .....</b>	<b>r 10 216</b>	<b>r 11 951</b>	<b>13 242</b>
<b>Sewerage—</b>			
Loan charges—Interest .....	3 070	3 756	4 266
Redemption .....	1 073	1 290	1 542
Sinking fund contributions .....	99	123	141
<b>Total .....</b>	<b>4 242</b>	<b>5 169</b>	<b>5 949</b>
Other payments (b) .....	r 3 760	r 4 107	4 359
<b>Total sewerage .....</b>	<b>r 8 002</b>	<b>r 9 276</b>	<b>10 308</b>

**Local Government Authorities, Tasmania**  
**Revenue Fund Payments: Ordinary Services and Business Undertakings**  
**Classified According to Service—continued**  
**(\$'000)**

Payments for—	1976-77	1977-78	1978-79
Abattoirs—			
Loan charges—Interest .....	91	146	196
Redemption .....	39	58	68
Sinking fund contributions .....	14	22	30
Total .....	145	226	293
Other payments (b) .....	1 517	1 511	1 469
Total abattoirs .....	1 662	1 738	1 761
Total business undertakings .....	r 19 880	r 22 964	25 311
Grand total .....	r 69 204	r 77 476	86 286
Percentage increase (c) .....	r 6.3	r 12.0	11.4

(a) Comprises working expenses, capital expenditure out of revenue fund, grants paid to semi-government authorities and sundry payments.

(b) Comprises working expenses, capital expenditure out of revenue fund and sundry payments.

(c) Over previous year.

The Beaconsfield Municipality is served by the West Tamar Water Supply Scheme, which the municipality maintains and manages as agent for the Rivers and Water Supply Commission. All debt in the Municipality in respect of water supply became the responsibility of the Commission on 1 July 1960. Interest and principal repayments to the Commission on loans raised for the purpose of this water supply have been included in 'Water supply—Other payments' in the above table.

Launceston, Burnie, Devonport and Campbell Town operate municipal abattoirs; other abattoirs in Tasmania are operated by the private sector.

The next table gives a summary of local government revenue fund payments:

**Revenue Fund Payments: Ordinary Services and Business Undertakings, Tasmania**  
**(\$'000)**

Year	Adminis- tration (a) r	Loan charges				Other payments		Total r
		Interest	Redemp- tion (b)	Sinking fund contribu- tions (b)	Business under- takings (r)	Roads, streets, bridges r	Other r	
1973-74 .....	3 407	5 307	3 660	297	4 498	8 531	12 681	38 381
1974-75 .....	4 415	5 974	4 204	308	4 844	12 292	19 793	51 830
1975-76 .....	5 721	7 166	4 205	354	5 274	14 509	27 889	65 118
1976-77 .....	6 875	8 751	4 496	375	6 272	15 252	27 183	69 204
1977-78 .....	7 902	10 322	5 457	413	7 534	15 546	30 302	77 476
1978-79 .....	7 979	12 036	6 304	495	8 452	17 493	33 527	86 286

(a) Administration charged to ordinary services only.

(b) Includes redemption from sinking fund.

### Loan fund payments

The following table shows annual payments by local government authorities from loan funds:

**Local Government Authorities, Tasmania: Payments from Loan Accounts  
Classified According to Purpose  
(\$'000)**

Purpose	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Water .....	1 145	1 041	2 118	2 856	2 576	3 444
Sewerage .....	2 487	4 229	7 542	7 672	5 767	5 227
Drainage .....	351	448	460	801	769	800
Road, street and bridge construction .....	2 462	2 751	3 467	4 498	7 205	7 574
Recreational facilities .....	1 108	1 018	1 859	1 632	1 659	1 806
Halls and community centres .....	377	968	1 676	510	206	193
Other .....	873	2 224	2 186	2 611	4 953	5 077
<b>Total .....</b>	<b>8 803</b>	<b>12 677</b>	<b>19 306</b>	<b>20 579</b>	<b>23 135</b>	<b>24 120</b>
<b>Percentage increase (a) .....</b>	<b>-8.9</b>	<b>44.0</b>	<b>52.3</b>	<b>6.6</b>	<b>12.4</b>	<b>4.3</b>

(a) Over previous year.

**Employees of Local Government Authorities**

The following table shows total employees of local government authorities over a six-year period. The number of employees of individual authorities ranges from one to over 500 persons.

**Local Government Authorities, Tasmania: Persons Employed (a) at 30 June**

Particulars	1974	1975	1976 (b)	1977	1978	1979
<b>General administration—</b>						
Males .....	543	558	479	506	533	557
Females .....	235	290	283	277	281	297
Persons .....	778	848	762	783	814	854
<b>All other services—</b>						
Males .....	1 957	2 807	1 956	2 404	2 304	2 191
Females .....	29	165	156	160	184	186
Persons .....	1 986	2 972	2 112	2 564	2 488	2 377
<b>Total—</b>						
Males .....	2 500	3 365	2 435	2 910	2 837	2 748
Females .....	264	455	439	437	465	483
Persons .....	2 764	3 820	2 874	3 347	3 302	3 231

(a) Comprises permanent and temporary employees, including persons employed on local government work programs financed by Federal Government unemployment relief grants; part-time employees are excluded.

(b) The reduction in the number of 'General administration' personnel is due to a reassessment of the distinction between administration and 'All other services' classifications. Figures from 1976 are not strictly comparable with those for earlier years.

**WATER SUPPLY AND SEWERAGE**

Water supply and sewerage were once exclusively the responsibility of the cities and municipalities; two semi-government authorities, the Metropolitan Water Board, and the Rivers and Water Supply Commission, now operate bulk supply schemes, piping water for distribution by the local government authorities in the Hobart and Launceston areas, and directly to certain industrial consumers. These authorities and their functions are described below.

**Metropolitan Water Board**

The overall control of water supply in Hobart, Clarence, Glenorchy and Kingborough is vested in the Metropolitan Water Board, but the four local government authorities retain primary responsibility for reticulation and sale to consumers. The Board has a large pumping station and treatment plant at Bryn Estyn on the Derwent, pipeline capacity being 136

megalitres per day. Before the Board came into operation in 1962, the four metropolitan local government authorities had their own supply schemes (e.g. Hobart was supplied from Lake Fenton and Mount Wellington); these schemes still operate but the Board's pumping works based on the Derwent now give an assured supply.

The Board also controls the Southern Regional Water Supply Scheme which draws water from the Derwent at Lawitta to supply Hobart's eastern shore suburbs. On the eastern shore, the Board has now extended its service to the towns of Cambridge, Midway Point, Sorell, Seven Mile Beach, Lauderdale and Rokeby, while western shore extensions serve Margate, Snug and Howden.

### Financial Relationship

Under the *Metropolitan Water Board Act 1961*, the four metropolitan local government authorities no longer borrow money for metropolitan water works, but are provided with the necessary capital by the Board. The Board obtains its funds from private lenders and the State Loan Fund, the local authorities in turn being required to make revenue contributions to the Board. The effect of this arrangement can be seen in State local government loan debt tables where the debt in respect of water shows only very minor annual increases; in effect, the expenditure of the four metropolitan local government authorities for water works undertaken since 1961 is reflected in the debt of the Board and not in debts of the municipalities. At 30 June 1979 the loan debt of the Board to the State Treasury was \$17.70m and to other lenders \$15.08m.

The financial relationship between the Board and the four metropolitan local government authorities is summarised in the following table:

**Metropolitan Water Board: Income and Expenditure**  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
<b>INCOME</b>					
Municipal contributions—					
Hobart .....	1 392	1 701	1 998	2 226	2 654
Glenorchy .....	806	953	1 084	1 162	1 344
Clarence .....	750	942	1 155	1 205	1 345
Kingborough .....	150	192	255	278	323
Special consumers .....	315	302	361	401	529
Direct earnings, Southern Regional Scheme .....	367	473	426	600	647
Other revenue .....	142	215	245	222	217
<b>Total .....</b>	<b>3 921</b>	<b>4 778</b>	<b>5 524</b>	<b>6 093</b>	<b>7 059</b>
<b>EXPENDITURE</b>					
Reimbursement of working expenses—					
Hobart .....	542	729	841	911	1 139
Glenorchy .....	406	483	564	574	525
Clarence .....	194	190	245	335	362
Kingborough .....	80	88	112	125	182
Bulk supply, operation costs .....	733	972	1 012	1 291	1 220
Administrative expenses .....	141	147	184	172	193
Interest .....	1 452	1 684	1 933	2 093	2 259
Depreciation .....	411	449	490	531	576
Superannuation (a) .....	—	—	—	157	181
Other .....	—	—	—	—	3
<b>Total .....</b>	<b>3 960</b>	<b>4 742</b>	<b>5 382</b>	<b>6 189</b>	<b>6 640</b>

(a) In 1977-78 a fund was established to meet future superannuation commitments.

The preceding table excludes capital contributions. These are shown in the next table:

**Metropolitan Water Board: Capital Contributions to Southern Local Government Authorities  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Hobart—</b>						
Construction and improvement .....	183	202	382	354	503	772
Loan redemption and conversion .....	33	86	38	37	34	33
Total .....	215	288	420	391	537	805
<b>Glenorchy—</b>						
Construction and improvement .....	121	113	360	401	282	177
Loan redemption and conversion .....	155	178	43	45	42	40
Total .....	276	291	403	446	325	217
<b>Clarence—</b>						
Construction and improvement .....	44	69	42	322	140	140
Loan redemption and conversion .....	49	94	43	50	70	50
Total .....	94	163	85	372	210	190
<b>Kingborough—</b>						
Construction and improvement .....	93	278	167	122	219	195
Loan redemption and conversion .....	13	52	23	10	8	17
Total .....	106	331	190	132	228	212
<b>Total—</b>						
Construction and improvement ..	441	662	951	1 199	1 145	1 284
Loan redemption and conversion	250	410	147	142	154	140
Grand total .....	691	1 073	1 098	1 341	1 299	1 424

The Board makes capital contributions to the four local government authorities for: (i) construction and improvement of their water works; and (ii) redemption of their water debt raised prior to creation of the Board. The Board finances these capital contributions by: (i) borrowing from the State Government; (ii) borrowing from the public; and (iii) application of internal funds, e.g. depreciation funds. The cost of servicing loans, raised by the Board to meet local government requirements, is met from revenue contributions by the four local government authorities.

#### *Capital Expenditure*

Funds raised by the Board for capital purposes in 1978-79 totalled \$6 050 000, of which \$2 050 000 was raised by local external borrowings and \$4 000 000 by overseas borrowing. A sum of \$4 500 000 was raised to partly finance the duplication of the West Derwent Scheme which has not yet been commenced. The main item of capital expenditure incurred was \$1 424 000 for municipal reticulation systems.

### **Rivers and Water Supply Commission**

#### *Introduction*

The *Water Act* 1957, proclaimed as from 1 September 1958, conferred on the Rivers and Water Supply Commission all powers which had been previously exercised by the Water, Sewerage and Drainage Board. The Commission exercises a general control over the utilisation of the State's water resources and has specific functions in relation to local government authority water, sewerage and drainage schemes. It also operates the North Esk Regional Water Supply, West Tamar Water Supply, Prosser River Supply, Togari Water Supply and Cressy-Longford Irrigation Scheme. (Details relating to the last two schemes appear in the chapter 'Land Use and Agriculture'.)

#### *Relations with Local Government Authorities*

The Commission examines all proposed municipal water supply and sewerage schemes before construction commences to ensure that the schemes are economically sound. (Schemes

proposed by the three cities, Hobart, Launceston and Glenorchy are exempt from examination by the Commission.) If a scheme is considered to be beyond the financial resources of the local authority, the Commission may recommend to the Minister for Lands and Works that a subsidy be paid. Such assistance is payable where investigations show that the revenue which a council might reasonably be expected to raise from rates and other charges is not sufficient to meet the annual loan charges and expenditure on maintenance, operation and administration. In determining the amount of financial assistance payable to any municipality, the Commission takes account of the maximum revenue which that municipality might reasonably be expected to raise from rates and other charges. An annual revenue requirement for each subsidised scheme is determined. This is reviewed from time to time to take account of increases in annual values and of the capacity of ratepayers to contribute to the annual costs of water and sewerage schemes.

#### *Regional Schemes*

*North Esk Regional Water Supply:* This scheme, managed by the Commission, serves portions of the municipalities of Evandale, George Town, Lilydale, St Leonards and Westbury. In addition the scheme provides water for industrial purposes to Bell Bay. Water taken from the North Esk at Watery Plains is treated at Chimney Saddle, where plant capacity is 29.5 megalitres per day. Total income from the scheme during 1978-79 was \$1 278 000 which included sale of water to: (i) municipalities, \$936 000; (ii) industrial users, \$256 000; and (iii) wayside consumers, \$85 000. At 30 June 1979, capital cost of the scheme amounted to \$10.9m.

*West Tamar Water Supply:* This scheme was partially completed by the Beaconsfield Municipality but under the *West Tamar Water Act* 1960 was vested in the Rivers and Water Supply Commission. The Act provided that the scheme should be managed and maintained by the Beaconsfield Council as agent for the Commission. Water for the scheme is drawn from Trevallyn Lake on the South Esk River and can be treated at a rate of 18 megalitres per day. The level of charges is determined by the Commission; Beaconsfield Municipality collects revenue on behalf of the Commission and is reimbursed for expenditure incurred. The scheme serves the western shore of the Tamar located in the Beaconsfield Municipality. Total income from the scheme during 1978-79 was \$462 000 while expenses of the scheme were \$305 000. Capital cost of the scheme to 30 June 1979 was \$2.7m.

*Prosser River Scheme:* This scheme supplements the water supply for the town of Orford in the Spring Bay Municipality and also supplies water to the Triabunna woodchip plant and the Shelley Beach area. Capacity of the scheme is 2.5 megalitres per day. Income for the year 1978-79 was \$26 000, while expenses amounted to \$68 000. Capital cost of the Prosser River Scheme to 30 June 1979 amounted to \$442 000. In 1979 the running of the treatment works was taken over by the Commission.

*Curries River Dam:* 1979 saw the completion of the Curries River dam (capacity 12 000 megalitres) and 8 kilometres of 850 mm/650 mm pipeline to Bell Bay at a total cost of \$1.25 million. This is the first step in a scheme to supplement both the North Esk and West Tamar supplies and extend the latter to Greens Beach.

## PLANNING AUTHORITIES

### Town and Country Planning

#### *Introduction*

Before the Federal Labor Government took office in 1941, governments (both state and federal) had shown little interest in town planning legislation. The war-time Federal Labor Government encouraged activity in this field and in the period 1944-45 four states, including Tasmania, passed legislation with provisions largely based on existing British and New Zealand planning statutes.

Passed in 1944, the *Tasmanian Town and Country Planning Act* applied only to areas which were proclaimed as a result of municipal requests. The Act created the position of Town and Country Planning Commissioner. In 1962 the *Town and Country Planning Act* was repealed and its provisions incorporated in the *Local Government Act* 1962 under which the powers of the Commissioner were broadened so that, with the approval of the Minister, he could require any municipality to prepare a planning scheme. The Commissioner for Town and Country Planning functions as a corporation sole under the *Local Government Act* 1962 and in respect of his statutory powers is responsible to Parliament.

### *Functions*

Briefly, the function of the Commissioner is to approve municipal planning schemes and to certify that subdivision proposals are in accordance with these schemes and meet the other requirements as laid down in the *Local Government Act 1962*. Also the Commissioner may require: (i) any municipality to prepare a planning scheme; or (ii) two or more municipalities to co-operate in the preparation of a master planning scheme; he is empowered to specify the completion date for such schemes. If the municipality fails to comply with the Commissioner's requests, then the Commissioner may prepare a scheme, the municipality meeting all preparation costs. A municipality may voluntarily prepare a planning scheme and submit it to the Commissioner for approval. If a scheme, prepared for an area to which a master plan applies, is submitted to the Commissioner for approval then the Commissioner, before giving a decision, must consult the authority which prepared the master plan. The Commissioner is also empowered to deal with objections to any planning scheme, including master plans prepared by a master planning authority.

### *Legal Procedure for a Planning Scheme*

After the Commissioner gives provisional approval to a planning scheme the municipality must make public the scheme and place a copy in the municipal office for public inspection. Following public notification a three months period is allowed for objections to the scheme by: (i) any owner or occupier of rateable property in the area affected; (ii) health officers as defined in the *Public Health Act 1962*; (iii) the municipality, but only if the scheme has been altered or prepared by the Commissioner. Objections are lodged with the municipality which then forwards the objections, together with a statement of its opinion on them, to the Commissioner for his consideration. The Commissioner hears and determines all the objections except in such cases where he considers the objection sound and the municipality agrees with it. The municipality may request and be entitled to a formal hearing.

If, because of the number and magnitude of objections to a planning scheme, the Commissioner considers it should be substantially modified, he may: (i) recommend that the Minister reject it; or (ii) direct that a specified part of the scheme be revised. In both of these cases another scheme or part scheme has to be prepared and submitted to the Commissioner for provisional approval.

After all objections have been dealt with and the necessary modifications made to the plan, the Commissioner, with the Minister's approval, approves and seals the scheme. The sealed scheme is then publicly notified, placed before both Houses of Parliament and recorded in the central plan register.

### *Scope of Plan*

A town and country planning scheme may deal with the following planning matters: (i) all roads (public and private), streets, footpaths, building lines and land adjacent to foreshores—the plan should cover both alteration to existing roads, streets, etc. and proposed new roads, streets, etc.; (ii) positioning of buildings and the general nature and design of buildings; (iii) preservation of land for afforestation, recreation and open spaces; (iv) preservation of objects of historical or natural interest; (v) sewerage and drainage; (vi) lighting and water supply systems; (vii) specification of the use to which areas may be put; (viii) provision of amenities; (ix) stages of development; and (x) ancillary or consequential works.

### *Subdivision Approvals*

Except where the Commissioner authorises a council or master planning authority to deal with subdivision plans, all such plans submitted to the council must be forwarded to the Commissioner for approval. (At any time, a council's power to authorise subdivision plans without reference to the Commissioner may be withdrawn by him.) When considering subdivision plans the Commissioner may: (i) call for an amendment that either the council requires or the Commissioner considers the principles of town and country planning demand; or (ii) refuse consent to the council approval. The Commissioner is required to ensure that areas for public use are retained along sea and lake shores and rivers and rivulets.

### *Planning Appeal Board*

The Planning Appeal Board consists of a Chairman, who must be a legal practitioner or barrister, and two other members, at least one of whom must be experienced in town and country planning. Persons affected by the decisions of a local government authority in

approving or refusing planning approvals may appeal to the Planning Appeal Board. The Board's determination of an appeal must be given effect to by the municipality. Its decision is conclusive and binds all parties to the appeal. Notices of appeal must be lodged with the Clerk to the Commissioner for Town and Country Planning.

### *Regional Planning Authorities*

The State Government now subsidises each of the three Regional Planning Authorities (i.e. the Southern Metropolitan Planning Authority, the Tamar Regional Master Planning Authority, and the North-West Master Planning Authority) on a dollar for dollar basis by matching the amount contributed by their constituent members. In return for this assistance each Authority is required to undertake planning studies and administer rural subdivision controls delegated to it by the Town and Country Planning Commissioner. The subdivision powers are administered within the context of a guideline policy handed down to each Authority by the Commissioner.

### **Southern Metropolitan Planning Authority**

#### *Introduction*

The Southern Metropolitan Planning Authority was established in 1978 following an amendment to the *Local Government Act* 1962. The new Authority replaces the former Southern Metropolitan Master Planning Authority which was disbanded in 1973.

#### *Representation and Distributions*

Constituent members of the Authority are the Cities of Hobart and Glenorchy, the Municipalities of Clarence, Kingborough and Brighton, and the Marine Board of Hobart. Under the Act, each constituent member provides one representative on the Authority, and there is provision for a Government nominee.

#### *Duties of the Authority*

The *Local Government Act* prescribes the following as duties of the Authority:

- (i) To determine the policies that should be adopted with respect to the use and development of the land within the districts of its constituent municipalities, particularly having regard to the desirability of the promotion of the region as an entity in economic, administrative and social terms.
- (ii) In regard to matters affecting two or more constituent municipalities, it shall give or arrange the giving of information, advice and assistance.
- (iii) It shall take steps as appear practicable to co-ordinate the activities of the authorities and persons concerned.

#### *Functions of the Authority*

The Authority has undertaken to provide comprehensive data and information on the region, and is undertaking studies which will provide a basis for strategic planning of the metropolitan area.

### **Tamar Regional Master Planning Authority**

The Tamar Regional Master Planning Authority was established in September 1969, following a petition to the State Government by the City of Launceston and the Municipalities of Beaconsfield, George Town, Lilydale, Longford and St Leonards. Westbury and Evandale, two essentially rural municipalities, became members in April 1974 to complete the membership of the natural region. In 1978, the Port of Launceston Authority became a constituent member.

The Authority consists of three representatives from the Launceston City Council and two from each of the other member authorities. Financial support is given by the constituent councils, in proportion to the annual value of rateable property.

#### *Regional Plan*

Initially, a consortium of town planning consultants was engaged to produce a preliminary report which was completed in mid-1971. This report formed the basis for the Regional Plan for the area, which was prepared by the Authority's staff. The aim of the



constituent councils in the preparation of the Regional Plan was the unified promotion and development of the Tamar Valley region. The Plan was prepared under three principal objectives—planning, environmental and promotional.

The planning objective proposed four principal divisions aligned north to south along the Tamar and South Esk Rivers:

- (i) *Northern Tamar*—centred on the port of Bell Bay with the principal theme being the development of industrial potential and port facilities.
- (ii) *Central Tamar*—extending from Moriarty Reach to Dilston; to be promoted as a recreation and tourist area with the preservation of the existing scenic landscape character.
- (iii) *Southern Tamar*—centred upon Launceston with provision for the retention and further development of the City as the commercial and service centre of the region.
- (iv) *Esk Valley*—rationalisation of transport links and industries, and the promotion of the area's intensive agricultural potential.

The major regional planning policies were completed in 1974, and adopted by the constituent councils. During 1975 the final adopted policies were compiled into a strategic planning policy and submitted for Government approval.

The current major activities of the Authority concern the preparation of planning schemes and outline development plans for councils. In 1978 the Authority was delegated the task of administering rural subdivision controls by the Town and Country Planning Commissioner. For this and other tasks the Authority receives a State Government contribution equal to the sum raised by member authorities.

The Authority undertakes major planning studies and is involved in industrial and employment promotion studies and activities relating to the Tamar Region. Recently completed promotional studies include 'A Potential Investors Guide to the Tamar Region, 1978' and 'Tamar Region, Employment Promotion Strategy and Potential Investors Opportunities, 1980'. The most recently completed major planning study was the 'Tamar Region Plan, 1979'.

#### North-West Master Planning Authority

This Authority was constituted in February 1971 in accordance with provisions of the *Local Government Act 1962*. The eight member local government areas are Latrobe, Kentish, Devonport, Ulverstone, Penguin, Burnie, Wynyard and Circular Head. Constituent councils each have two members on the Authority. Finance is obtained from member municipalities in proportion to the annual value of rateable property, with a dollar for dollar contribution from the State Government in respect of work undertaken for the Town and Country Planning Commission.

Approximately 9 000 square kilometres in area and containing a population of some 90 000, the Authority's sphere of jurisdiction includes two interstate airports, three marine board port facilities, substantial industrial establishments with international markets, nine principal towns with two approaching city-status, and prime soil districts supporting livestock and vegetable production.

The fundamental objective of the Authority is to foster, co-ordinate, and promote the development of the region along sound economic and environmental lines. Under State legislation, it has the responsibility to prepare a statutory master plan for the region.

An initial policy adopted by the Authority was to inhibit further linear expansion along the coast and to focus development inwards from the existing urban nodes, with the rural landscape in between serving as punctuating relief. This has been schematically illustrated in an Outline Development Strategy Map and Report released in November 1974. The Authority has also endorsed the concept of Burnie being the cultural and arts centre for the North-West and West coasts of Tasmania as a regional complement to the major facilities provided in Launceston. In addition, concerted support has been accorded the unique and ambitious 9 000-hectare Dial Regional Sports/Recreation Complex now being implemented in the central location of Penguin.

In 1978 the Authority was delegated the task of administering rural sub-division controls by the Town and Country Planning Commissioner. The Authority is also presently engaged in the promotion of industry, based on the raw materials of the region, and tourism in the area.

## THE PEOPLE PLACES OF LAUNCESTON

In recent years a great deal of interest has centred on the development of pedestrian malls in Tasmania. To date, malls have been established in the central business districts of Launceston, Hobart and Devonport. The following article describes the establishment of Launceston's Mall which was the first of its kind in Tasmania. This article is based on the booklet, *The People Places of Launceston*, produced by the Launceston City Council.

### How it All Began

#### *'The Mall' Concept*

Although referred to as a concept from time to time prior to 1970, 'The Mall' really became a firm proposal as part of the adopted recommendation from a planning study of Launceston's central city area in 1972-73. The considerable funds arising from the sale of an area of council land in July 1973 enabled the Council to make the decision to proceed with the Mall, at no cost to the ratepayers of the City. The associated car parking was also provided at no cost to the ratepayers, being funded from accumulated parking fees. The detailed planning of the Mall was undertaken by the Council with the participation of representatives of the business community. Construction of the Launceston Mall commenced on 1 February 1975. It was completed and officially opened on 11 October of the same year. It has already been hailed as a great success, from both the civic and commercial point of view and is creating considerable interest in many local authorities throughout Australia.

The Mall is not an entity in itself but rather the feature of a scheme to pedestrianise the central area of the City, thus making it more attractive as a shopping and business area. The total scheme envisaged sections of two streets being completely closed to traffic and developed as pedestrian precincts. Other sections of street would be treated with widened footpaths, seating, planting, etc., and have restricted traffic movements.

In conjunction with the malls and semi-malls, additional off-street parking areas were provided. These serve as rear access to the shops, several of which have developed new shop fronts onto the car parks and provide through access to the Mall area. Inter-connecting pedestrian links were provided through various shops and arcades.

It would be fair to say that initial reaction from shopkeepers was somewhat mixed. However, after detailed explanations to individuals and to a collective meeting of shopkeepers, the enthusiasm grew rapidly. This was in no small way due to the Council inviting the traders to be represented equally with the Council on the Committee responsible for the detailed planning and implementation of the project.

Naturally, during the construction period, which extended through the winter months, there was some inconvenience to shoppers and the public. Care was taken to keep the public fully informed on the construction program, and with very few exceptions there was nothing but praise for its smooth operation. The public generally have been delighted with the concept, as demonstrated by donations amounting to several thousand dollars towards some of the features in the Mall.

For many years the central area has had a one-way traffic system and the re-arrangement of traffic flows due to the Mall created no real problems. Fortunately, the partial completion of Government financed inter-suburb expressways had reached the stage where considerable relief was obtained from former heavy traffic movements through the central area at the time the Mall commenced. A new bus route system was worked out in conjunction with the Metropolitan Transport Trust, and all routes have stops adjacent to either end of the Mall. As far as patronage of public transport is concerned, it is doubtful that the mall has had any effect.

As far as can be ascertained, the whole of the central area is benefiting from the project, more so than the more distant shops. There is no doubt that the additional 190 off-street parking spaces have contributed to this.

The Mall is intended to be a live area; it contains a raised podium area and has a built-in public address system. Events such as art and other cultural exhibitions, appearances of visiting celebrities or sporting personalities, fashion parades, etc. take place almost daily. The Council in conjunction with the retail traders has engaged, part-time, a Central Area Promotions Officer to co-ordinate activities in the Mall.

The Mall has created a new awareness of the Central City area, and has provided a focal point for people to meet and relax which was formerly lacking. Its importance in this regard

has largely been responsible for the Council receiving the Institute of Architects Triennial Award for Civic Design, and the honour of 'Premier Municipality' for 1975, in the annual competition conducted by the Tasmanian Tourism Development Authority.

Following the success of the Mall, sufficient confidence was gained to extend into the other 'people places' recorded in this article.

### *The Central Area Strategy*

The 1972 Central Area Study established the first comprehensive Central Area Strategy. Integrated proposals were put forward for traffic circulation, parking and pedestrianisation. Incoming traffic was to circulate around a loop road which gave access to shopper car parks. The core shopping streets were to be pedestrianised to give the shopper a safer, more pleasant and convenient centre. Existing arcades and open spaces would be connected with major new malls and semi-malls to create a network of continuous footways in the heart of the city. Walking distances for most shoppers would be reduced; from car parks to the centre of the network is generally less than 150 metres and bus stops are within a few metres of the malls.

Actually, there are two distinct pedestrian areas, each including four street blocks—one centred on Brisbane Street and the shopping area, and a separate Civic Precinct centred on Cameron Street. The development of the Civic Precinct was planned over a number of years in co-operation with the State and Federal Governments.

### *Progress to Date*

Two major malls have been implemented, Brisbane Street in 1975 and The Quadrant in 1978, and many smaller open spaces. There are some 1 300 m of pedestrian routes at present. For the first time these are truly 'people places' in the Central Area. Further progress will see the full benefit of the system, as more parts of the network are joined together in Cameron, Charles and St. John Streets, and a further section of Brisbane Street. These will be the semi-malls where special provision can also be made for bus and taxi access. When Wellington Street is connected to Cimitiere Street traffic will be able to circulate around the Central Area more freely. Also, there is provision for including pedestrian bridges across traffic routes in new major developments. On completion of the pedestrian program, all parts of the Central Area will enjoy equal benefits.

## **Engineering Considerations**

### *Preliminary*

Speaking generally, the proportion of the required civil engineering input which comprises mostly those works located underground, can be as high as 50 per cent of the total cost. Depending on location it can, therefore, represent a significant constraint on the overall feasibility for any 'people place' under consideration. It is argued that the need to install these underground works to an ultimate of quality in both materials and workmanship is not wasteful or unreasonable. The long term benefit is to keep future disturbance of the costly surface paving, due to pipeline failure, to an absolute minimum. This need necessarily imposes a 'super' cost on the engineering works which must be weighed against instant, 'skin-deep' solutions that may soon fail and need total re-construction.

Engineering aspects of pedestrian development basically divide into the following areas: traffic management; essential services rationalisation; sub-soil conditions; cleaning and maintenance; and surface level configuration. Each of these aspects is discussed below.

### *Traffic Management*

Usually the first problem to be solved is that of Traffic Management. It is often the most elusive as it involves assessing the feasibility of alternative new arrangements.

Four distinct traffic types need to be analysed for both 'before' and 'after' situations:

- (i) Vehicles generally of commercial type, servicing frontage properties of the mall or semi-mall.
- (ii) Emergency vehicles—fire brigade, ambulance, police and essential service vehicles.
- (iii) Shopping traffic which previously used the street for parking.
- (iv) Through traffic which uses the area to be closed as access to other destinations.

Future traffic strategies are usually determined from surveys and projections of present conditions, but often stand or fall on the availability of alternative rear access.

With regard to retail premises, the assessment was that shoppers need to be provided with an adjacent car park containing at least 150 per cent of the bays lost (compensation plus new capacity for expected increased retail activity).

### *Essential Service Rationalisation*

Service pipelines in streets fulfilling the following functions constitute the usual underground spectrum: gas mains, electricity cables, Telecom cables, water mains, sewers, and stormwater mains. Four classes can be distinguished:

- (i) Those services which require replacement due to an advanced stage of deterioration resulting generally from old age.
- (ii) Those services which require relocating due to selected design features and functions of the pedestrian space.
- (iii) Services required to meet future demands.
- (iv) New services generated by the operational aspects of the mall, etc., i.e. drainage, audio, elimination of the pits and manhole covers, hydraulic features and other often movable elements.

Careful planning is required to ensure that all below-ground services are separated in all three dimensions—for this task the sequence of relaying is vital.

Experience has shown that this phase of the development is best executed in a single blow as the first step of construction. It is important to remember that there are often up to four different public authorities involved. A deliberate and thorough movement through this phase is advised, allowing sufficient time to make adjustments to line and level, often necessary as a result of digging up uncharted services.

### *Sub-soil Conditions*

In order that the pavement thickness of the pedestrian surface can be determined, engineering tests must be carried out on the sub-soil. It must be remembered that both the sub-soil and the overlaying pavement should be capable of withstanding the heavy loads imposed by emergency vehicles without deformation. Notice must also be taken of the extent and level of any sub-soil water present so that 'French' drains can be provided to control this potentially damaging element.

### *Cleaning and Maintenance*

One of the important considerations in pavement design after completion is that of cleaning. Practice has shown that daily attention is essential. Selection of cleaning equipment sympathetic to the paving needs to be given due attention; daily pressure hosing is a convenient method but must not be allowed to 'drown' landscaping in lower beds.

### *Surface Level Configuration (Levels)*

Desired engineering and architectural topographical forms of the final surface can often conflict. There needs to be 'give and take' from both disciplines so that the final levels are both functional for rain runoff disposal, appealing to the eye and comfortable under-foot.

### *Choice of Surface Treatment*

In the choice of the surface treatment, again both engineering and architectural considerations are important. Those considerations which require engineering emphasis are: wearing quality; stain resistance; ease of removal and replacement; absorption characteristics; and acceptable compressive strength to withstand vehicle loadings and movements.

### *Conclusion*

Although most of the engineering component is underground and out of sight, it should not be out of mind for planners. The success of the aesthetic and functional aspects of a 'people place' depends heavily on the quality of the preceding engineering expertise. Due weight was given to this need during recent pedestrian developments in Launceston.

## Landscaping Opportunities

### Design Philosophy

Landscaping is the cheapest 'Ingredient' in the total design of a 'people place', yet its potential to provide soft aesthetic pleasure is greater than the hard disciplines of architecture and engineering. The landscape design philosophy adopted was to provide vistas of trees throughout the inner city areas and to promote a 'gardens impact' for pedestrians within these developments. It was essential to maximise the winter sunshine and yet provide ample summer shade to suit the temperate Launceston climate.

Design details were adjusted to suit the different locations. Basically, wherever larger developing trees were to be sited, particularly in the confines of The Malls, a minimum root zone spatial volume of one cubic metre per tree was provided. In some cases these zones were overlapped to provide a combined larger volume capacity. In many situations root zone areas had to be protected by developing them within sunken concrete walls—this measure was designed not only to prevent roots from escaping into nearby services but also to prevent potentially toxic leachates from coming into contact with them. In all cases, drainage was provided from root zones and water supply provided directly to them.

The choice of plant material was based on a number of factors, including the essential hardiness to local conditions, the suitability to the design functions, and the adaptability of the species to be transplanted and planted out at an advanced stage of development.

These parameters led to the choice of a high percentage of deciduous trees and a number of exotic evergreens, as generally the Australian native species are not suitable for moving fully grown and a majority are evergreen and would not provide the winter sunshine function. Additionally, it was decided that the choice of a high percentage of exotic trees was well suited to Launceston's traditional image, which basically was created by early European settlers who sought to recreate conditions similar to their 'home' countries. The selection of exotic trees also introduced more colour into the landscape—appropriate species were used to provide early spring colouring and also contrasting, bright autumn colours.

### Planting Techniques

Overseas landscape developments were studied, including European experience in the handling of advanced trees. Overseas research also assisted studies in the comparative benefits of using recent, as against advanced, nursery stock. Factors taken into account include establishment costs, initial visual impact and growth patterns. The decision to use 'semi-mature' trees in 'The Malls' was only taken after seeing the success of projects such as that along the Thames Embankment, London. An experienced contractor with suitable equipment, assisted by Council personnel, was engaged to undertake this specialised work. More than 20 very advanced trees were prepared and lifted from a rural estate (vital statistics—20 years plus in age, up to 8 metres in height, trunk diameters to 150 mm, root ball dimensions of 1.8 m). These trees were selected up to 12 months before lifting and all roots were severed in two opposite quadrants. The roots were cut 600 to 700 mm out from the tree trunk. The digging trench was backfilled with enriched friable soil to encourage fibrous root development at the outer edge of the lifting 'root ball'. Three months later the process was repeated on the two remaining quadrants—this provided a more suitable plant for transplanting and reduced the 'shock' to the tree system.

A foliage spray to reduce transpiration rates was applied at the time of lifting to further reduce shock. However, the projects were not big enough to assess whether sprays had any significant effect. The first tree lift in Brisbane Street proved satisfactory and subsequent projects have been undertaken entirely by Council staff and equipment with similar success. It is believed the value of 'instant' effect has justified the high initial cost. Although there had been some concern that a regression period would occur, the large trees have generally continued to make good growth development.

The species of semi-matured trees used were: *Populus tremuloides* (Quaking Aspen); *Quercus coccinea* (Scarlet Oak); *Liquidambar styraciflua* (Liquidambar); *Liriodendron tulipifera* (Tulip tree); *Pseudotsuga menziesii* (Douglas Fir); and *Acer platanoides* (Goldsword Purple).

The progressive replacement of larger trees with smaller specimens is planned to ensure a continuity of healthy continually growing trees. A balance between semi-mature trees and





Brisbane Mall, Launceston

[Tasmanian Film Corporation]





Quadrant Mall, Launceston

[Tasmanian Film Corporation]

advanced nursery stock (up to seven years old) of trees and shrubs from the Council's nurseries will be maintained. The nursery plantings will inherit the role of dominant trees in the longer term.

### *Watering*

Fixed irrigation systems were provided in each of the 'people places' The Civic Precinct has semi-automatic controlled pop-up spray systems to irrigate lawns, shrubs and trees. This enables efficient, effective off-peak watering with minimum inconvenience to the people using the areas. The Malls have underground irrigation systems. Again this is to ensure effective watering with minimum wastage, inconvenience and application costs. These systems can also be used to apply drip feed nutrition via liquid fertilisers. In this case, balancing of 'diet' by monitoring equipment in special storage 'lockers' is required.

## **Architecture and Environmental Design**

### *The Brief*

Out of chaos resulting from the inevitable conflict between vehicular traffic and pedestrian activities, the architect's brief was born:

'Create spaces for "People" to shop, wander, wait for a friend, talk-a-while, pay those accounts or take a quick nap in the sun.'

Spaces of individual character form the broader pattern of 'people places' within the Central Business District, each linked both visually and physically. Existing laneways and arcades are used where available and landscaped internal spaces adjacent to car parks are created as new links. A most important factor in the planning of pedestrian networks is to provide a pattern of landscaping that will lead and direct users from one space to the next.

### *Linkages*

At one end of the scale is the broad landscaped space of the Civic Precinct with rolling lawns, timber edging and screens, interlocking coloured paving, a Japanese lantern, a Denham Henty Waterscape and the 'Rainforest' sculpture. More intimate is the Regional Library forecourt with artistically shaped lawns and curved brick edges complementing the solid form of the Library building and historic St Andrews' Kirk; delicate foliated Chinese elms and birches for summer shade support the scale of the flowing walkways. Adjacent, the Government Offices enjoy low profile planting behind brick walling embracing landscaped courts at both ends of the St John Street facade. Radial brick paving, low brick walling and curved blackwood seating planned around established large trees, complete the scene. From the Tourist Bureau gardens, the visitor may choose to walk through Trustees' court via various shopping arcades to 'The Quadrant' Mall or along the commercial section of St John Street to 'The Mall'. Access to 'The Quadrant' from St John or Brisbane Streets is identified by 'landscape thrusting' of the pavement onto the vehicular carriageway. This 'Semi-Mall' development was further developed during 1979 in other parts of Brisbane Street.

### *The Architect's Role*

The Architect's role of planning design and construction of pavement finish and the fixed and movable elements commences with the recognition of the physical restraints imposed by, and requirements of, engineering and horticultural disciplines. Many pre-conceived design solutions may be shattered when the labyrinth of underground services are identified. Complexity of existing services plus the extensions or new systems necessary to accommodate the needs of the planned development, coupled with tree planting zone requirements, are seen as the major constraints. Access through pedestrian spaces for service and emergency vehicles imposes further physical limitation on design in respect to height, width and density of fixed elements and completely ruled out covered walkways across these areas.

Having assessed the likely impact these constraints have on planning and placement of the above surface elements, human factors require consideration. Estimated user densities, preferred pedestrian movement patterns (desire lines) became vital factors in siting fixed and movable elements (street furniture), and choice of pavement materials. Careful examination of existing streetscape to identify its quality, character, significance and scale, further influenced the final design and furnishing of the Launceston People Places. Combined



horticultural and urban design skills are necessary to choose the exact specimen, with a scale and habit most suited to the needs of each location. Is low and dense or tall and sparsely foliated best to achieve the over-riding objective of maintaining overall visual balance? Should the planting zone be raised or lowered to 'frame that vista', highlight 'that architectural gem' or screen that overpowering monolith? Unwelcome intrusions onto the 'people places' which destroy the balance with the human scale, can rarely be removed overnight—hence the blessing of the landscape screen.

Choice of materials was heavily influenced by the design concept, colour harmony, wearing quality, maintenance factor availability and of course the budget. Tiles, pavement systems, planter finishes, light standards, seating, drinking fountains, all underwent this exhaustive selection test.

### 'The Mall'

Developed in 1975 to form a shopping core in Brisbane Street, Launceston's first pedestrian space typified the corridor street and had all the inherent inner city problems of growth and decay and renewal. Almost all the 'styles' of Launceston's 170 years of architectural history can be found there. The siting of major retail stores at each end of 'The Mall' and another large store midway on the opposite side of the street, ensured pedestrian movement over the full length and breadth of the space. Pedestrian flow by obstruction may be the best way to describe the spacing and siting of planters, podium, visitor information kiosk, children's play sculpture, lights and litter bins. Differing patterns of pavement tiles in earthy tones were chosen for each of three mall zones, with the smoother surface used for all preferred routes; heavier textured cobblestone and fishscale type were applied to the more passive areas where traffic is of a slower pace. The forum, centrally located and incorporating an audio podium, is surrounded by gently graded space for people to gather *en masse*. Crowded, hustle and bustle of pre-Christmas shopping to the quiet, dull winter's day were the pedestrian density extremes considered in the final design analysis.

### The Quadrant

The City's newest shopping mall entices its users to step backward a century into an era of quiet dignity. Its well mannered Victorian architecture intimately embraces the gentle curve of the enclosed space. Subsurface restraints again dictated planting zones. The circular form of the area allowed for compromise, as corridor placement of services similar to Brisbane Street was not possible, and therefore not a major design problem.

The Quadrant's curved form was adopted as the basis for design of all elements. Integrated colourful concrete paving slabs simulating the bluestone setts commonly used in the Victorian era strengthen 'The Quadrant' curve as did circular patterns around planters, the fountain base and laneway junctions. An old water well found during construction was given a radial brick surround and facsimile cover. Raised planters were constructed from paving setts which sweep out of the pavement and finish at varying levels to add visual contrast as well as to provide supplementary seating for users of all ages. Cast period standards with post top lanterns provide a complementary vertical element to an otherwise circular lineal form. Litter bins with semi-closed tops in dark green with gold lettering are placed nearby to brightly coloured Victorian 'Railway Station' seats. The Quadrant aviary, a two metre diameter by four metre high masterpiece in wrought steel, gaily painted, houses changing displays of birds and fowl of many species. This element, like the flower barrow, adds human interest and scale to The Quadrant.

Centrally placed at the intersection with Clayton's Lane, a 2.5 metre high cast iron Victorian Fountain centrepiece, surmounts its red granite base; this tends to provide a focal point and meeting place for 'The Quadrant'. Adjoining laneways form an integral network linking car park, toilets, retail stores and rear entrance of commercial and entertainment facilities. These 'European' lanes are all recognised as a pedestrian bonus. They broaden interest and usage by encouraging the many additional pedestrian movements to newly developed rear entries.

### *The Arcades*

A diverse collection of lanes, spaces and buildings link the main pedestrian streets and add greatly to their interest. The total length of arcades is approximately 1 kilometre. They range from an historic hotel converted to commercial use on three levels to rear shop 'fronts' in lanes giving through access. More are being developed in conjunction with renewal projects.

Arcades enable internal areas to be used both for commercial purposes and for small landscaped open spaces such as Trustees' Court—the City's first environmental improvement project.

### *The Civic Precinct*

This was planned as a centre for Government Offices of all three levels, and ancillary civic functions (library, churches, etc.) along the spine of Cameron Street. Several new buildings have been integrated with the Town Hall and other historic buildings by means of landscaped open spaces. The whole will become one precinct when Cameron Street is pedestrianised; it will have a quieter atmosphere than the commercial areas, and include a greater proportion of landscaped areas and features (a sculpture, water displays, etc.). Re-cycling of historic buildings is significant in this precinct. (Macquarie House, circa 1832, is centrally placed.)

### **Team Approach**

The Council having made the policy decision that the Malls should be developed, and having made the necessary allocation of funds, realised the need for the detailed design, planning and implementation to be totally co-ordinated and unfettered in progress by continued consideration by Council or its committees. The preliminary plans were explained to a meeting of property owners involved, who were then invited to nominate four representatives to a Mall Policy Committee. This Committee, in addition to the owners representatives, had the Chairman of the Council's Planning and Policy Committee as Chairman, and two other Aldermen and senior officers of the council departments involved as members. Responsible to this Committee was a design team. This comprised an officer from each of the three technical departments which would carry out the detailed planning and arrange the implementation—namely: the City Engineer's Department, City Architect and Planner's Department and Parks and Recreation Department. The design team met at least weekly from the preliminary planning stage to completion, their recommendations being considered by the Mall Policy Committee monthly. Acceptance of quotations between meetings, and day to day minor decisions were left to the Council's Administrative Manager as part of his normal function within existing delegation. The direct involvement and keen participation of the business sector of the Mall Policy Committee ensured that property owners were kept fully informed of planning details as decisions were made, and of each phase of the development in advance of construction.

The Management approach referred to proved to be most successful. Both Malls in Launceston were developed in a spirit of enthusiasm and harmony between the Council, its officers, the business people in the area and the public generally.

For the purpose of the orderly and effective management of the City's retail 'people places', a Mall Manager has been retained. His duties include City promotion and 'making it happen' in the pedestrian spaces that service a very strong and diverse shopping core. People naturally enjoy sitting, strolling or shopping at leisure in pleasant surroundings. Many also enjoy musical entertainment in its various styles, or special promotions in the podium areas, or simply watching the world go by. Many people are attracted from distant regions by the life, colour and character of the area. The more people, the more potential customers.

Not surprisingly then, the retail Malls have generated greater business activity. With continuing promotion, further momentum is anticipated. Creative commercial promotions relish environments free from motorised traffic. A wide field of public interest activities featured to date includes: exhibitions of student arts and crafts; school choirs; Christmas and Easter music and plays; visits by world celebrities; Disneyland characters; band music; organ recitals; ethnic dance groups; 'Life. Be In It.' activities; yo-yo championships; Batman festival highlights; a London bus; emergency service displays, including first aid and resuscitation demonstrations; and many other displays of general public interest.

**Management**

Mall Management has two operations:

- (i) Day to day management for and on behalf of the Launceston City Council over a fairly wide-ranging field, including application of City By-Laws; and
- (ii) Management of promotions and general organisations in conjunction with The Mall Traders' Committee.

Attention is constantly given to maintaining the balance between activity and tranquility in keeping with the various environments. Such administration requires entrepreneurial expertise as well as initiative in attracting items to excite both young and old. Management also requires an ability to get along with the public in its many manifestations; to 'police' areas in so far as larrikinism and vandalism are concerned; to seek co-operation from all with regard to clearing up litter; to 'move on' nuisance elements; and to report damage, breakages, etc. for repair. A diary is kept of bookings for all Mall activities being controlled by a daily permit system. A charge is made for the hire of identified areas and for the use of the mobile kiosk. Raffle sales are also organised on a permit system to ensure that *ad hoc* elements are excluded and that not more than two selling points operate at any one time.

There have been no major management problems to date, but no doubt as the City's 'People Places' continue to be a popular success, pressures will be brought to bear to 'over-use' them. Keeping the rate and diversity of usage in balance will be the key to future success.

**Non-Promotions**

Promotions and their management have not yet been necessary in the minor arcade space or the more tranquil Civic Precinct. However, it is envisaged that, in the future the programming of such civic events as band concerts and open forums, could well occur as a public service. The whole of Cameron Street which links City Park to Royal Park may well eventually become a 'linear park' crammed with activities of civic importance and flanked with gracious architecture of civic significance.

**Further References****ABS Publications:**

Local Government Finance, Tasmania (5501.6) (annual, 1978-79 issue released 7-7-79, 33 pp.).

Australian Municipal Information System (AMIS) Manual (1103.0) (irregular, latest issue released in March 1977—this Manual describes the AMIS computer data base system which contains a range of data on a comparable basis for all Australian local government areas. Output from the system is available on request).

Public Authority Finance: State and Local Authorities (5504.0) (annual, Canberra Office publication, 1978-79 released 9-9-80 128 pp.).

**Other Publications:**

*Report of the Auditor-General and the Statement of Public Accounts* (published annually by the Tasmanian Government Printer, Hobart).

## **Chapter 5**

### **PUBLIC FINANCE**

#### **FEDERAL AND STATE GOVERNMENT**

##### **Change in Relationship Since 1901**

Prior to the establishment of the Commonwealth in 1901, the individual states exercised complete autonomy with respect to their raising of revenue and the manner in which this was spent. Due to developments since Federation, the states now have only limited ability to raise the money required for revenue and capital purposes. State revenue is now supplemented by substantial grants from the Federal Government and the raising of loans is under the control of the Australian Loan Council, a body set up under Federal legislation. The emergence of the Federal Government as the dominating influence in the financial transactions of the state governments can be traced to three events:

- (i) Under the Constitution the states surrendered the right to levy customs and excise duties, which passed exclusively to the Federal Government.
- (ii) Under the 1927 Financial Agreement, the Australian Loan Council became the borrowing agent for the states.
- (iii) During World War II, under the uniform tax scheme, the Federal Government became the sole authority levying taxes upon the income of persons and companies. (Introduction of new federal-state income tax sharing arrangements from 1977-78 has given each state the right to impose a surcharge or grant a rebate on personal income tax levied in its state.)

The result of these changed relationships can be summarised as follows: (i) the Federal Government, with two votes plus a casting vote as against one vote for each of the states, exercises a substantial degree of control over the Australian Loan Council and, consequently, over public investment in government securities; (ii) to carry out functions for which their revenue is inadequate, the states have become heavily dependent on the Federal Government for general and specific grants. The Federal Government is therefore placed in a position to exercise a substantial degree of control over the ordinary public expenditure of the states.

##### **Principal Activities of the States**

The Federal Constitution lists the matters over which the Federal Parliament has power to legislate. Some of those powers are given exclusively to the Federal Government (e.g. defence, customs and excise) but, in many matters, the Federal and State Governments have concurrent powers, federal law prevailing where there is conflict. Matters other than those listed in the Constitution remain the concern of the states. Principal government activity at state level embraces education, health and welfare services, the development of internal resources, land settlement, soil conservation, maintenance of law and order and the provision of public utility services such as roads, electricity, public transport and water supply. Such activities are undertaken either by state departments or by statutory and local government bodies created under state legislation. Apart from charges for services (where charges can be levied) the most obvious form of revenue for the discharge of these functions is state taxation but the Federal Government exercises a practical monopoly over the more lucrative tax sources (e.g. income tax, customs and excise, sales tax). A responsibility therefore rests on the Federal Government to supplement state revenues.

## Federal Government Payments To or For Tasmania

## Summary of Federal Government Payments

In the following sections the main forms of Federal Government assistance are described; the following table shows the total annual payments to Tasmania from the Federal Government's Consolidated Revenue Fund:

Federal Government Payments To or For Tasmania  
(\$'000)

Particulars	1976-77	1977-78	1978-79
GENERAL PURPOSE FUNDS			
Personal income tax entitlement .....	186 294	214 150	240 737
Capital grants .....	31 901	33 496	33 496
Total .....	218 195	247 646	274 233

## SPECIFIC PURPOSE PAYMENTS

Revenue payments—			
Payments under financial agreement—			
Interest on State debt .....	534	534	534
Sinking fund on State debt .....	2 069	2 225	2 386
Universities .....	15 939	r 17 234	18 315
Colleges of advanced education .....	8 678	9 256	9 436
Technical and further education .....	969	1 110	1 673
Schools .....	11 049	r 12 120	13 290
Pre-schools and child care .....	2 006	2 071	1 658
Public hospitals (Medibank) .....	18 918	31 621	33 176
Community health .....	2 038	2 306	1 868
School dental scheme .....	1 475	1 684	1 226
Unemployment relief .....	—	—	—
Regional employment development scheme .....	—	—	—
Tasman Bridge disaster .....	1 715	730	—
Assistance for local government .....	4 004	5 290	5 741
Other .....	4 050	2 934	3 858
Total revenue payments .....	73 444	r 89 115	93 161
Capital payments—			
Universities .....	1 061	1 008	788
Colleges of advanced education .....	404	1 598	3 221
Technical training .....	r 1 664	1 970	394
Schools .....	4 266	r 6 187	4 385
Pre-schools and child care .....	5	—	—
Hospitals .....	3 000	3 350	4 959
Housing advances .....	24 220	25 220	20 436
Roads .....	20 716	r 21 873	23 347
Sewerage .....	500	—	—725
Tasman Bridge disaster .....	13 785	5 870	2 259
Assistance to primary industry .....	2 419	363	—
Other .....	3 956	7 588	4 053
Total capital payments .....	r 75 996	r 75 027	63 117
Total specific purposes payments .....	r 149 440	r 164 142	156 278

## GENERAL AND SPECIFIC PURPOSE PAYMENTS

Total payments (a) .....	r 367 635	411 788	430 511
Percentage increase (b) .....	3.3	r 12.0	4.4

(a) This total cannot be identified as such in state accounts since part is taken into Consolidated Revenue Fund, part into Loan Fund, and the balance into Trust and Special Funds.

(b) Over previous year.

### *Financial Assistance Grants*

Under the *Federal States Grants (Income Tax Reimbursement) Act 1942* the states received general revenue grants for vacating the field of income tax. Various formulae were used to calculate each state's grant. From 1959 to 1975-76 the method was to annually increase the grant by multiplying the previous year's grant by: (i) the state's percentage increase in population; (ii) the percentage increase in average wages for Australia; and (iii) a betterment factor. The betterment factor was: 1.2 per cent from 1965-66 to 1970-71; and 1.8 per cent from 1971-72 to 1975-76; (it was set at 3.0 per cent for 1976-77, 1977-78 and 1978-79).

### *Personal Income Tax Sharing with the States*

Commencing in 1976-77 financial assistance grants were replaced by personal income tax sharing arrangements between the Commonwealth and the states. This was a central element in the 'new federalism' policy of the Fraser Coalition Government. The income tax sharing between the Commonwealth and states was introduced in two stages. The first stage became operative in 1976-77; the second stage required further Commonwealth and state legislation. Federal legislation for Stage 2 was passed during 1977-78.

The principal elements of Stage 1 are:

- (i) The states receive a given percentage (39.87) of the net personal income tax collections for the previous year. This replaced the previous arrangement whereby the amount was 33.6 per cent of the collections for that year. The changes were enacted following the recommendations of the October 1977 Premiers' Conference.
- (ii) For the first four years of the scheme (1976-77 to 1979-80) the Commonwealth guaranteed that no state would receive less than it would have under the old financial assistance grant formula.
- (iii) The total entitlement for all states is first decided. The amount is then divided between each of the states on the basis of each state's population and a relativity factor based on 1975-76 financial assistance grant receipts.
- (iv) The four less populous states can continue to apply for special grants in addition to their basic income tax sharing entitlements.
- (v) There will be periodic reviews of relativities between states.

In 1978-79 Tasmania received \$240 737 000 under the system. The actual calculated share was \$231 664 000 but, under the old financial assistance grants formula, Tasmania would have received \$240 737 000. (State receipts equal to receipts under the financial assistance grants formula are guaranteed for the first four years of Stage 1.)

Under Stage 2 each state may legislate to impose a surcharge on personal income tax in the state or to give a rebate of personal income tax payable under Commonwealth law. The state bears the cost of any such rebate. The Commonwealth will collect the surcharge or grant the rebate as the state's agent. In the case of a surcharge levied by one of the four less populous states the Commonwealth will make equalisation arrangements. These will ensure that the state will get the same relative advantage from the surcharge as a state with a broader personal income tax base.

### *Special Grants (Section 96 of the Constitution)*

Section 96 of the Constitution reads: 'During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any state on such terms and conditions as the Parliament thinks fit.'

The Commonwealth Grants Commission was established in 1933 and consists of three members on a part-time basis assisted by a full-time staff. In its third report (1936) it fixed upon the principle of financial need, which was expressed in the following terms: 'Special grants are justified when a state through financial stress from any cause is unable efficiently to discharge its functions as a member of the federation and should be determined by the amount of help found necessary to make it possible for that state by reasonable effort to function at a standard not appreciably below that of other states'. In arriving at its recommendations, the Commission each year makes a detailed comparison of the budget results of the claimant states with those of the non-claimant states.

Prior to the passage of the *Federal States Grants Act 1959*, the claimant states had been Tasmania, W.A. and S.A. The new formula evolved under the *States Grants Act 1959* had been devised partly in reaction to a claim by Victoria and Queensland to be also considered as claimant states; in effect, the new scale of increased grants under this legislation resulted in the number of claimant states falling to two, W.A. and Tasmania. The Grants Commission could then have used the accounts of the four non-claimant states to reach a basis for comparison; it finally decided to adopt a two-state standard, based on the budgets of N.S.W. and Victoria. Recent developments have included: (i) the withdrawal of W.A. as a claimant state from 1968-69; (ii) the acceptance of S.A. as a claimant state from 1970-71; (iii) the acceptance of Queensland as a claimant state from 1971-72; (iv) the withdrawal of Tasmania as a claimant state from 1974-75; and (v) the withdrawal of South Australia as a claimant state from 1975-76.

On 11 June 1974 the Premier announced Tasmania's withdrawal as a claimant state for a Special Grant under Section 96 of the Commonwealth Constitution. The announcement was of historic significance for the State for two reasons:

- (i) In 1912-13 Tasmania first obtained a Special Grant under Section 96 of the Commonwealth Constitution and from that time until 1973-74 had received a special grant each year.
- (ii) In 1933 the Grants Commission was established to examine the claims of states requesting special grants to assist their revenues. From 1933 until 1973-74 Tasmania had had a continuous association with the Grants Commission and its determinations had considerably influenced the State Government's financial policies.

Tasmania's withdrawal from the Grants Commission's Special Grants procedures became operative for the 1974-75 financial year. The withdrawal gives the State Treasurer greater freedom in planning the State's finances; however, some of the protection afforded by the special grant against any sudden unexpected deterioration of the State's financial position is lost.

The financial arrangement for the withdrawal was that \$15m would be added to the State's Financial Assistance Grant for 1974-75 and that the total receipt, including the \$15m, would become the base for calculating the 1975-76 Financial Assistance Grant. Also, as part of the withdrawal arrangement, Tasmania's 1972-73 and 1973-74 advance special grants were not subject to final adjustment.

For details of the method by which Special Financial Assistance Grants were paid to Tasmania, reference should be made to Year Books prior to the 1976 edition.

#### *Payments Under the Financial Agreement (1927)*

Under the Financial Agreement, which was entered into by the Federal Government and the states in 1927, the Federal Government contributes towards interest and sinking fund payments in respect of state debts existing at 30 June 1927, and towards sinking fund payments in respect of state debts incurred after that date for purposes other than the funding of revenue deficits. The Federal Government's contribution to Tasmania to assist with the payment of interest on State debt was set at an annual sum of \$533 718, to continue until 1985.

The sinking fund contributions made by the Federal Government under the Agreement in respect of state debts vary according to the date and nature of the borrowings. On state debts existing at 30 June 1927 the Federal Government is making sinking fund contributions at the rate of 0.125 per cent a year until 1985 and in respect of cash loans raised for the states since that date, the Federal Government makes sinking fund payments for 53 years at the annual rate of 0.25 per cent. Each state is obliged to make sinking fund payments for corresponding periods at the rate of 0.25 per cent per annum regardless of the date on which the debt was incurred. The only exception is in relation to debt incurred for the purpose of funding revenue deficits. In these instances, the Federal Government makes no sinking fund contributions and the states are obliged to make annual contributions to the sinking fund of not less than four per cent. However, in respect of Treasury Bills issued to cover states' revenue deficits accruing between July 1927 and June 1935, special arrangements were made under which the Federal Government contributes 0.25 per cent per annum on the amount outstanding until June 1983.

Recent Federal Government sinking fund contributions in respect of the Tasmanian public debt are shown in the following table:

**Federal Government Contributions to National Debt Sinking Fund: Tasmanian Debt  
(\$'000)**

Year	Amount	Year	Amount
1973-74 .....	2 044	1976-77 .....	2 069
1974-75 .....	2 141	1977-78 .....	2 225
1975-76 .....	2 100	1978-79 .....	2 386

The acceptance of some Federal Government liability for interest and sinking fund payments on state debts was only one part of a more extensive agreement setting up an Australian Loan Council and a National Debt Sinking Fund. The raising of loan money for the states under the Agreement is described later in this chapter.

*New Assistance for Debt Charges*

At the 1970 February Premiers' Conference, the Federal Government announced it was prepared to take over state debt totalling \$1 000m during the five-year period 1970-71 to 1974-75. However, this would have necessitated amendments to the 1927 Financial Agreement and caused considerable delay. The Federal Government then proposed an alternative which involved grants to the states equal to interest on specific parcels of state debt. The distribution between the states was in proportion to Federal Government securities on issue on behalf of each state at 30 June 1978.

The 1927 Financial Agreement brought into effect by the *Financial Agreement Act 1928* was amended during 1975-76 with retrospective effect from 30 June 1975. The total of \$1 000 million of state debt was formally transferred to the Commonwealth.

*Grants for Non-reproductive Capital Works*

To assist the states in meeting their capital works programs since 1970-71, the Federal Government has provided annual grants for financing non-reproductive capital works. Total approved borrowing programs from 1973-74 to 1978-79 have been (in \$m): 1973-74, 867; 1974-75, 1 087; 1975-76, 1 291; 1976-77, 1 356; 1977-78, 1 434; and 1978-79, 1 434. The proportion of the total states' capital works program provided by Federal Government grants in this period has been: 1973-74, 32.1; 1974-75, 32.1; and 33.3 for 1975-76 to 1978-79 inclusive. For 1979-80 the proportion will again be 33.3 per cent. Changes in the composition of total state capital works programs have occurred during this period: (i) the 1972-73 figure includes borrowings for state housing; (ii) from 1973-74, figures exclude borrowings for welfare housing and from 1 January 1974 tertiary education—the latter has become a Federal Government function following an agreement at the June 1973 Premiers' Conference.

Distribution of the grants was by agreement between the states or by the Federal Government if the states failed to reach agreement. Tasmania's share of the 1978-79 grant was \$33.50m which was credited to the State's Loan Fund.

The provision of these grants reduces the amount which the State needs to borrow in order to carry out its capital works program and eases the burden of debt charges (interest payments and sinking fund contributions) on the Consolidated Revenue Fund.

*Federal Government Aid For Roads*

Financial assistance to the states for roads during the triennium 1977-78 to 1979-80 has been mainly provided under the *Federal State Grants (Roads) Act 1977*. The Act was based on the former Commonwealth Bureau of Roads' *Report on Roads in Australia 1975*. The Federal Government decided to make \$475m available to the states in 1977-78 and that the total grants in 1978-79 and 1979-80 would be equivalent in real terms to the 1977-78 grant. The legislation also established expenditure quotas for each state to be met from its own funds. In 1979-80 total grants under the 1977 legislation totalled \$546m.

Over the five years 1980-81 to 1984-85, the Commonwealth is to provide \$3 650m to the states and the Northern Territory as grants for road construction and maintenance. Of this amount, \$606.9m was to be provided to the States in 1980-81. This represents an increase of 11.2 per cent over the amount provided in 1979-80 and is expected at least to maintain the 1979-80 level of Commonwealth financial assistance in real terms. The State expenditure quotas are also to be increased similarly.



The Commonwealth also provides aid to the states for planning and research projects related to roads. For the three years 1977-78 to 1979-80 the assistance was paid under the *Transport Planning and Research (Financial Assistance) Act 1977*. For 1977-78 the Commonwealth met two-thirds of the expenditure on approved programs of projects. For 1978-79 and 1979-80 one half of such expenditure was met by the Commonwealth.

The following table shows amounts received by Tasmania for recent years for general road expenditure and for transport planning and research projects:

**Federal Government Aid for Roads: Payments to Tasmania**  
(\$'000)

Year	Payments for roads (a)	Payments for transport planning and research (b)
1974-75 .....	18 400	185
1975-76 .....	19 900	198
1976-77 .....	20 500	216
1977-78 .....	21 700	195
1978-79 .....	23 208	173
1979-80 .....	24 944	186

(a) Grants paid under general roads Acts.

(b) Grants paid under the *Urban Public Transport (Research and Planning) Act 1974*, *Transport (Planning and Research) Act 1974* and the *Transport Planning and Research (Financial Assistance) Act 1977*.

#### **Loan Council (Financial Agreement)**

The original Financial Agreement was made on 12 December 1927, but Tasmania did not become a party to it until 1 July 1928. The basic intention of the agreement was a co-ordinated approach to the loan market, the establishment of sound sinking fund arrangements and the sharing of state debt charges with the Federal Government. The main provisions are summarised below:

- (i) The Federal Government assumed certain liabilities in respect of state debts (see previous section on interest and sinking fund payments made by the Federal Government in respect of Tasmanian State debt—'Payments under the Financial Agreement 1927').
- (ii) The Australian Loan Council was set up to co-ordinate the public borrowings of the Federal Government and the states. It consists of the Prime Minister (or his nominee) as chairman, and the state premiers (or their nominees). Each financial year the Federal Government and the states submit programs to the Loan Council setting out the amounts they desire to raise by loan during the next year. Revenue deficits to be funded are included in the borrowing programs but borrowing by the Federal Government for defence purposes is excluded from the terms of the agreement.

If the Loan Council decides that the total amount of the loan programs for the year cannot be borrowed at reasonable rates and conditions, it then decides the amount which shall be borrowed and may, by unanimous decision, allocate that amount between the Federal Government and the states. In default of a unanimous decision, the Federal Government is entitled to one-fifth of the total amount to be borrowed and each state to a proportion of the remainder equal to the ratio of its net loan expenditure in the preceding five years to the net loan expenditure of all states during the same period.

Subject to the decisions of the Loan Council the Federal Government arranges all borrowings, including those for conversions, renewals and redemptions. However, the Federal Government or a state may borrow for 'temporary purposes' by way of overdraft or fixed deposit, subject to limits fixed by the Loan Council. In addition, the Federal Government may borrow within Australia, or a state within its own territory, from authorities, bodies, institutions, or from the public by counter sales of securities, subject to Loan Council approval. Federal Government securities are issued for money borrowed in this way and amounts so borrowed are treated as part of the borrowing program for the year.

- (iii) The agreement involved setting up a National Debt Commission to administer one consolidated sinking fund in respect of the debt of the Federal Government and the states. Sinking fund moneys are used to redeem unconverted securities at maturity and to re-purchase securities on the stock market.
- (iv) It was realised at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowings of large amounts by semi-government authorities (such loan raisings do not form part of state or Federal Government debt and therefore are not within the scope of the original agreement). A set of rules evolved in 1936 is regarded as the 'Gentlemen's Agreement' and makes provision for the submission to the Council of annual loan programs in respect of larger semi-government and local government authorities (in conjunction with the loan programs of the governments concerned) and for the fixing of the terms of individual loans coming within the scope of the annual program. For 1979-80 larger authorities are those semi-government and local government authorities borrowing more than \$1.2m in a year. (For 1979-80 borrowings approved by the Loan Council for larger Tasmanian semi-government and local government authorities amounted to \$34 445 000.)

It should be emphasised that the Australian Loan Council does not itself raise money for Tasmanian semi-government and local government authorities; its concern is to assess the total impact of government borrowing for the year and then to fix ceilings for semi-government and local government authorities in the interests of a co-ordinated program.

The following table shows Loan Council borrowings undertaken on behalf of the State of Tasmania to finance new capital works and, for 1971-72 and 1972-73, housing:

**Tasmania: New Cash Borrowings Authorised by Australian Loan Council (a)**  
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1971-72 .....	(b) 47 020	1974-75 .....	54 952	1977-78 .....	66 992
1972-73 .....	(b) 51 252	1975-76 .....	60 743	1978-79 .....	66 992
1973-74 .....	(c) 43 467	1976-77 .....	63 802	1979-80 .....	58 171

(a) For State works programs; amounts credited to State Loan Fund.

(b) New cash borrowings for 1971-72 and 1972-73 include allocations for State housing.

(c) From 1973-74 excludes borrowings for State welfare housing and from 1 January 1974 for tertiary education.

From 1973-74, the previous table excludes allocations under the Federal Government and State Housing Agreements, which were also part of the Loan Council's program. The following table shows allocations to Tasmania for housing purposes:

**Tasmania: Allocations for Housing**  
(\$'000)

Year	Amount	Year	Amount	Year	Amount
1971-72 .....	(a) 1974-75 .....	26 369	1977-78 .....	25 220	
1972-73 .....	(a) 1975-76 .....	22 380	1978-79 .....	20 436	
1973-74 .....	16 445 1976-77 .....	24 226	1979-80 .....	10 352	

(a) Allocations included with other borrowings in the previous table (1971-72, \$8.3m and 1972-73, \$9.1m).

## STATE FINANCIAL TRANSACTIONS

### Tasmanian Public Account

The State Public Account includes the Consolidated Revenue Fund, the Trust and Special Funds, and the Loan Fund. Revenue from State taxation, Federal Government financial assistance grants and other departmental sources is paid into the Consolidated

Revenue Fund. Main expenditures from it are for education, health and hospitals, roads, law and order, public debt charges, and subsidies to State business undertakings. The Trust and Special Funds cover special transactions outside the ordinary operations of departmental expenditure, such as funds from the Federal Government for specific purposes and moneys held for expenditure by the State at some future time. The Loan Fund receives its funds from public borrowings and grants, and the main expenditure is on State public works and on advances to State business undertakings.

A summary of transactions on the Tasmanian Public Account is given in the following table:

**Public Account: Summary of Transactions, Tasmania**  
(\$'000)

Particulars	1975-76	1976-77	1977-78	1978-79
Cash and investments at beginning of year . . . . .	6 518	29 189	25 989	12 393
<b>Receipts—</b>				
Consolidated Revenue Fund . . . . . (a) 322 091	396 617	444 263	495 822	
Borrowings for new capital purposes . . . . . 60 743	63 807	66 992	66 992	
Other Loan Fund receipts . . . . . 47 898	48 039	52 223	56 873	
Net increase, Trust and Special Funds . . . . . 8 704	199	-2 908	1 816	
<b>Total . . . . .</b>	<b>439 436</b>	<b>508 662</b>	<b>560 570</b>	<b>621 503</b>
<b>Expenditure—</b>				
Consolidated Revenue Fund . . . . . (a) 317 947	395 033	450 706	492 961	
Loan Fund, public works and purposes . . . . . 98 818	116 823	123 459	121 201	
Discount . . . . . —	5	—	—	
<b>Total . . . . .</b>	<b>416 765</b>	<b>511 861</b>	<b>574 165</b>	<b>614 162</b>
Percentage increase . . . . . 14.2	22.8	12.2	7.0	
Cash and investments at end of year . . . . .	29 189	25 989	12 393	19 734

(a) These amounts are as reported by the State Treasurer, and disagree slightly with figures used later in this chapter which have been adjusted for remissions of casino tax.

The State Public Account is a complete record of the Government's operation of three specific funds, i.e. Consolidated Revenue, the Trust and Special Funds, and the Loan Fund. It is by no means a complete record of government activity, since statutory authorities and semi-government authorities such as the Hydro-Electric Commission, Transport Commission and Agricultural Bank carry on financial operations which are not recorded in the State Public Account. In a later section of this chapter under the heading 'Exclusions from Consolidated Revenue', the relationship between the finances of the principal authorities and the Consolidated Revenue Fund is described; the general principle is that gross receipts and expenditure of the authorities are excluded from the Public Account.

In the following table are shown the balances credited to each fund constituting the Public Account and the form in which the balances are held:

**Public Account: Summary of Balances at 30 June, Tasmania**  
(\$'000)

Year	Balance				Location			
	Accumulated Revenue Account	Loan Fund	Trust and Special Funds	Total	Cash in Treasury or bank	Advanced to departments	Govt. and other securities (a)	Total
1974 . . . . .	-7 282	2 490	13 643	8 852	2 359	931	5 562	8 852
1975 . . . . .	-13 544	7 486	12 576	6 518	3 295	970	2 253	6 518
1976 . . . . .	-9 400	17 308	21 280	29 189	4 696	1 423	23 069	29 189
1977 . . . . .	+1 583	2 926	21 479	25 989	1 655	1 411	22 923	25 989
1978 . . . . .	-6 443	265	18 571	12 393	-8 849	1 454	19 788	12 393
1979 . . . . .	-2 332	1 679	20 387	19 734	-11 153	1 435	29 452	19 734

(a) Includes fixed deposits.

In the previous table, 'Accumulated Revenue Account' is a suspense account recording accumulated surpluses and deficits in the Consolidated Revenue Fund, and also the funding of deficits. Details of the account are as follows:

**Accumulated Revenue Account: Summary of Transactions, Tasmania**  
(\$'000)

Year	Opening balance	Transactions			Closing balance
		Budget result, Consolidated Revenue	Special grant adjustment (a)	Deficits charged to Loan Fund (b)	
1973-74 .....	-6 586	-3 150	-1 350	+3 805	-7 282
1974-75 .....	-7 282	-13 544	-	+7 282	-13 544
1975-76 .....	-13 544	+4 144	-	-	-9 400
1976-77 .....	-9 400	+1 583	-	+9 400	+1 583
1977-78 .....	+1 583	-6 443	-	-1 583	-6 443
1978-79 .....	-6 443	+2 861	-	+1 250	-2 332

(a) It was Tasmanian Treasury practice to record special grant adjustments in the Accumulated Revenue Account and to include, in published Consolidated Revenue receipts, only the advance grant as determined by the Commonwealth Grants Commission.

(b) See later section in this chapter 'Deficit Funding'.

In the following section dealing with Consolidated Revenue, Treasury practice of eliminating special grant adjustments from Consolidated Revenue total receipts has been followed.

### Consolidated Revenue Fund

#### General

The financial transactions of the State of Tasmania are recorded under: (i) Consolidated Revenue; (ii) Trust Funds; and (iii) Loan Fund.

Payments from Consolidated Revenue are made only on the basis of authority found in: (i) the annual Appropriation Act of the Parliament; (ii) Acts of the Parliament made in previous years and under which certain annual payments are classified as 'reserved by law'; and (iii) the *Public Account Act* 1957 (as amended in 1962) and the *Audit Act* 1918.

The third category of authority listed above is designed to give the Treasurer and the Government some flexibility in public expenditure since the *Appropriation Act* cannot be expected to anticipate, to the nearest dollar, the expenses that are likely to be incurred for each and every item. The relevant sections of the amended *Public Account Act* are 5A and 5B. These provide that, in relation to Consolidated Revenue, the Treasurer may authorise transfers between votes within certain sub-divisions of the appropriation and, on the authority of the Governor, supplement certain appropriations and provide funds to meet expenditure for which no other provision exists. Transfers, as described under 5A, are a matter for the Treasurer but additional expenditure, as described under 5B needs ratification by Parliament before the close of the following financial year. Regulations 20 and 21 of the second schedule of the *Audit Act* provide for expenditure by the Treasurer to meet emergencies for which no vote exists; the Governor must first authorise such expenditure and the Auditor-General investigate the circumstances before payment can be made.

#### Exclusions from Consolidated Revenue

It should be observed that the Consolidated Revenue Fund does not include all revenue and expenditure in respect of activities undertaken or authorised by the State Government. Some moneys are paid directly into State Trust Funds; e.g. Federal Government assistance for roads is paid into the State Highways Trust Fund and the various expenditures on roads are made directly from that Fund. The gross receipts and payments of a number of State business undertakings and State authorities are excluded from the Consolidated Revenue Fund, their relation to the Fund being as follows:

- (i) The net loss incurred by the Transport Commission each year is met from the Consolidated Revenue Fund. The Commission's net loss occurs principally in respect of government shipping services which it administers. The Commission's gross receipts and expenditure are excluded from the Fund.

- (ii) Omnibus services in Hobart, Launceston and Burnie are operated by the Metropolitan Transport Trust. The *net* annual loss of the authority is a charge against Consolidated Revenue. Annual payment of debt charges on Government advances is credited to the Fund.
- (iii) The gross receipts and expenditure of the Hydro-Electric Commission are excluded from the Consolidated Revenue Fund; however the annual payment of debt charges by the Commission is credited to the Fund. Net profit or loss on the Commission's activities is carried forward in the authority's own suspense account. From 1971-72 the Commission has been required to pay an annual contribution to Consolidated Revenue. The amount was five per cent of the total revenue derived from retail sales of electricity in the preceding year, until January 1977, when it was reduced to 2½ per cent and eventually eliminated from January 1978. However, the 5 per cent tax on revenue was re-introduced in January 1979.
- (iv) Also excluded from the Consolidated Revenue Fund are the gross receipts and payments of: regional water schemes, Government Printing Office, Government Insurance Office, Public Trustee, State housing authorities, closer settlement, rural credits and other activities of the Agricultural Bank, etc. In accordance with various Acts, it is usual for the net profits or losses of the previous year to be paid to or from the Consolidated Revenue Fund for the current year. Debt charges on Government money loaned to the authorities are paid to Consolidated Revenue.

#### Consolidated Revenue Fund—Summary

The following table shows the transactions of the Tasmanian Consolidated Revenue Fund, the surplus or deficit, and the aggregate deficit at the end of each year.

Consolidated Revenue Fund: Surpluses and Deficits, Tasmania  
(\$'000)

Year	Revenue	Expenditure	Budget Result	Aggregate funded deficit at end of year
1973-74 .....	206 947	210 097	-3 150	32 508
1974-75 .....	268 522	282 065	-13 544	46 052
1975-76 .....	(a) 322 091	(a) 317 947	(a) +4 144	41 908
1976-77 .....	396 617	395 033	(b) +1 583	(b) 41 908
1977-78 .....	444 263	450 706	-6 443	43 158
1978-79 .....	495 822	492 961	+2 861	n. y. a.

(a) As reported by the State Treasurer, and may disagree slightly with figures used later in this chapter which have been adjusted for remissions of casino tax.

(b) Surplus in this year transferred to Loan Fund.

#### Deficit Funding

At 30 June 1978 the sum of \$43 158 000 had been charged against the Loan Fund as 'revenue deficits funded'; \$6 443 000 was carried as a negative balance in the Accumulated Revenue Account.

The next table shows the adjusted budget result for recent years and how the result was treated.

Consolidated Revenue Fund: Adjusted Budget Result and Treatment, Tasmania  
(\$'000)

Budget result			Budget result		
Year	Amount	Treatment	Year	Amount	Treatment
1972-73 .....	-4 132	Funded	1976-77 .....	+1 583	Transferred to Loan Fund
1973-74 .....	-3 150	Funded			
1974-75 .....	-13 544	Funded	1977-78 .....	-6 443	Part funded
1975-76 .....	+4 144	Offset	1978-79 .....	+2 861	n. y. a.

**Consolidated Revenue Fund—Receipts**

The following table shows Tasmanian Consolidated Revenue Fund receipts for recent years:

**Consolidated Revenue Fund: Receipts, Tasmania**  
(\$'000)

Item	1976-77	1977-78	1978-79
Federal Government grants—			
Financial agreement .....	534	534	534
Income tax entitlement .....	186 294	214 150	240 737
Education .....	11 269	11 204	4 299
Health (a) .....	32 400	38 165	39 499
Social welfare .....	599	764	1 183
Local Government .....	4 004	5 290	5 741
Total .....	235 100	270 107	291 993
Debt charge recoveries (b)—			
Interest .....	42 215	45 432	50 117
Sinking fund .....	4 576	4 930	5 228
Total .....	46 791	50 362	55 345
State taxation (c) .....	88 233	90 891	104 289
Victorian lotteries agreement .....	1 065	1 696	2 536
Territorial revenue—			
Forestry .....	5 313	5 615	6 047
Other property income, etc. ....	4 737	5 701	6 024
Total .....	10 050	11 316	12 071
Departmental revenue, fees, etc.—			
Education .....	327	366	354
Health .....	911	1 142	1 226
Law and order .....	3 353	3 845	4 567
Tourism .....	1 064	1 048	1 215
Other (d) .....	9 723	13 490	22 226
Total .....	15 378	19 891	29 588
Grand total .....	396 617	444 263	495 822
Percentage increase .....	23.3	12.0	11.6

(a) Includes receipts under the Medibank agreement: 1976-77, \$26 156 000; 1977-78, \$31 221 000; 1978-79, \$32 976 000.

(b) Mainly on advances made to semi-government authorities.

(c) See later section 'State Taxation'.

(d) Includes transfers from the Loan Fund and the State Highways Trust Fund relating to the Department of Main Roads and Construction of: for 1976-77, \$6.24m; 1977-78, \$6.80m; 1978-79, \$7.83m.

The relative importance of the various components of the Consolidated Revenue Fund can be assessed by expressing them on a per capita basis using the State mean population for the relevant financial year.

**Consolidated Revenue Fund: Receipts Per Head of Mean Population, Tasmania**

Item	1976-77 (\$)	1977-78 (\$)	1978-79	
			Amount (\$)	Per cent
Federal Government grants .....	574.7	r 655.6	702.8	58.9
State taxation .....	215.7	220.6	251.0	21.0
Debt charge recoveries .....	114.4	122.2	133.2	11.2
Departmental revenue, fees, grants, etc. ....	37.6	48.3	71.2	6.0
Territorial revenue .....	24.6	27.5	29.1	2.4
Victorian lotteries agreement .....	2.6	4.1	6.1	0.5
Total .....	969.5	r 1 078.3	1193.3	100.0

## State Taxation

During 1978-79 the chief state taxes, in order of importance were: pay-roll tax; motor taxes; stamp duties (on cheques, legal documents, etc.); probate and succession duties; and land tax. Pay-roll tax, which was handed over to the State by the Federal Government from the 1971-72 financial year, has now become by far the largest single source of State tax revenue.

In the following tables, the figures shown for total taxes paid to Consolidated Revenue do not agree with those published by the State Treasurer. Excluded from the tables are amounts received from the Victorian Government under the Victorian Lotteries Agreement while 'motor taxes' includes amounts not treated as taxes by the State Treasurer. The following table gives a summary for a three-year period, of State taxation taken into the Consolidated Revenue Fund:

State Taxation Collections Paid into Consolidated Revenue, Tasmania

Tax or licence	1976-77	1977-78	1978-79	
			Amount	Per cent
	\$'000	\$'000	\$'000	
Pay-roll tax .....	35 217	36 748	40 656	39.0
Motor taxes (a) .....	19 001	21 775	25 100	24.1
Stamp duties (b) .....	13 787	14 013	16 285	15.6
Deceased persons' estates duties .....	6 536	5 166	5 549	5.3
Land tax .....	3 773	3 930	4 867	4.7
Liquor tax and licences .....	3 443	3 774	4 228	4.1
Racing taxes .....	2 329	2 538	3 253	3.1
Casino tax and licence fees .....	2 177	2 084	2 640	2.5
Hydro-Electric Commission statutory levy .....	1 604	585	1 401	1.3
Soccer Football Pools tax .....	254	265	297	0.3
Entertainment tax .....	93	—	—	—
Other licences .....	19	13	13	—
Tobacco tax and licence fees .....	—	—	—	—
Total (c) .....	88 233	90 891	104 289	100.0

(a) See following section 'Motor Taxes'.

(b) Excludes: (i) stamp duties on bookmakers' tickets (included in 'Racing taxes'); (ii) stamp duty on third party insurance (included in 'Motor taxes'); and (iii) stamp duty on motor vehicle registrations (included in 'Motor taxes').

(c) Excluded are the following amounts received from the Victorian Government under the Victorian Lotteries Agreement: 1976-77, \$1 065 000; 1977-78, \$1 696 000; 1978-79, \$2 536 000.

**Motor Taxes:** In the preceding table motor taxes are shown as \$25 100 000 for the year 1978-79. The next table shows how this figure can be reconciled with motor tax figures published by the State Treasurer:

Motor Taxes (a) Paid to Consolidated Revenue Fund, Tasmania, 1978-79  
(\$'000)

Item	Amount
Motor taxes (a) .....	25 100
Less Stamp duty on—Vehicle registration (b) .....	4 265
Third party insurance (b) .....	468
Traffic fees (c) paid to—Police Department .....	2 263
Consolidated Revenue Fund .....	2 687
'Motor tax' as published by State Treasurer .....	15 417

(a) See preceding table 'State Taxation Collections Paid into Consolidated Revenue'.

(b) Treated as 'stamp duties' tax items by the State Treasurer.

(c) Includes motor vehicle registration fees, drivers' licences, charges for number plates, transfer of ownership fees and learners' permits.

Not all State taxation is paid into the Consolidated Revenue Fund, as shown in the following table:

**State Taxation Collections Paid to Special Funds, Tasmania**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
Motor taxation—			
Retained by Transport Commission .....	101	96	100
Paid to the State Highways Trust Fund .....	210	—	—
Racing taxation—			
Paid to racing clubs and Racing Commission .....	1 022	895	938
Insurance companies—			
Contributions to fire authorities .....	2 975	3 434	3 583
Total .....	4 308	4 425	4 621

The following table summarises total State taxation collections:

**Total State Taxation Collections, Tasmania (a)**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
Paid into—Consolidated Revenue .....	88 233	90 891	104 289
Special Funds .....	4 308	4 425	4 621
Adjustment (b) .....	+23	+298	—220
Total .....	92 564	95 614	108 690

(a) Taxation is described more fully in a subsequent section, 'Taxation in Tasmania'.

(b) An adjustment item is necessary to reconcile items referring to different accounting periods.

### Debt Charge Recoveries

After Federal Government grants and State taxation, debt charge recoveries is the next largest receipt item in Consolidated Revenue. The next table shows details of the interest and sinking fund payments made by various authorities on advances which have been made to them by the State Government. These advances have been made primarily from State loan borrowings and the Government attempts to recover amounts roughly equal to its liability for debt charges.

**Debt Charge Recoveries: Consolidated Revenue Fund, Tasmania**  
(\$'000)

Source of recovery	Interest			Sinking fund contributions		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
Agricultural Bank—						
Housing .....	347	463	649	—	—	—
State Advances Act .....	441	515	598	—	—	—
Closer settlement .....	148	168	195	—	—	—
Returned soldier settlement .....	15	14	15	—	—	—
Other .....	1	2	2	—	—	—
Herd Improvement Board .....	39	31	33	2	3	4
Forestry Department .....	1 016	1 178	1 332	—	—	—
Government Printing Office .....	17	18	30	3	3	3
Housing Department .....	1 508	1 711	1 866	247	274	288
Hydro-Electric Commission .....	32 019	35 129	38 105	3 993	4 320	4 568
King Island Abattoirs Board .....	36	38	39	5	5	5
Loans to industry—						
Aluminium industry agreement .....	98	98	24	—	—	—
Iron ore (Savage River agreement) .....	165	155	144	—	—	—
Other .....	625	750	921	—	—	—
Metropolitan Transport Trust .....	326	315	316	42	40	40



**Debt Charge Recoveries: Consolidated Revenue Fund, Tasmania—continued**  
(\$'000)

Source of recovery	Interest			Sinking fund contributions		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
Metropolitan Water Board .....	1 167	1 263	1 320	161	169	170
Rivers and Water Supply Commission .....	391	409	501	47	48	51
Tasmanian Grain Elevators Board ..	115	112	106	17	17	17
Tourism Development .....	273	331	420	—	—	—
Transport Commission .....	612	527	592	59	48	58
North-West Regional Water Authority .....	—	61	251	—	2	23
Marine Board of King Island .....	—	—	94	—	—	—
Midway Point Improvement Act 1975 .....	—	—	230	—	—	—
Other .....	2 856	2 146	2 334	—	2	1
<b>Total .....</b>	<b>42 215</b>	<b>45 432</b>	<b>50 117</b>	<b>4 576</b>	<b>4 930</b>	<b>5 228</b>

**Consolidated Revenue Fund—Expenditure**

In the following table a summary is given of the principal items of Consolidated Revenue Fund expenditure classified according to purpose:

**Consolidated Revenue Fund: Expenditure by Purpose, Tasmania (a)**  
(\$'000)

Purpose	1976-77	1977-78	1978-79
General administration <i>n.e.c.</i> .....	38 214	42 813	44 591
Law, order and public safety—			
Law courts and legal services .....	5 764	5 973	6 446
Correctional and custodial services .....	3 501	3 959	4 379
Police services .....	19 084	21 055	23 441
Fire protection .....	2 005	2 132	2 705
Road safety .....	350	403	407
Other .....	395	567	642
<b>Total .....</b>	<b>31 099</b>	<b>34 089</b>	<b>38 019</b>
Education—			
General administration, regulation and research .....	6 533	10 094	11 995
Student transport .....	4 394	4 870	5 250
Primary and secondary .....	79 031	86 378	95 639
Technical .....	7 596	9 327	11 055
University .....	19	36	132
Other higher education .....	5 651	6 320	6 371
Special schools .....	2 069	2 467	2 607
Other .....	55	16	12
<b>Total .....</b>	<b>105 348</b>	<b>119 508</b>	<b>133 061</b>
Health—			
General administration, regulation and research .....	1 727	2 537	2 583
Mental health .....	9 682	10 571	13 539
Other hospital and clinical services .....	59 943	68 698	73 531
Preventive services .....	564	138	157
Maternal and infant health .....	975	1 136	1 166
Other health services .....	5 093	6 253	6 969
Ambulance services .....	1 136	1 552	1 774
<b>Total .....</b>	<b>79 120</b>	<b>90 885</b>	<b>99 720</b>
Social security and welfare—			
General administration, regulation and research .....	906	1 030	1 143
Aged persons .....	396	366	1 355
Unemployed and sick persons and unemployment relief .....	4 340	1 746	1 319
Family and child care and assistance .....	2 487	2 862	3 459
Other .....	1 940	3 364	3 973
<b>Total .....</b>	<b>10 069</b>	<b>9 369</b>	<b>11 249</b>

**Consolidated Revenue Fund: Expenditure by Purpose, Tasmania (a)—continued**  
(\$'000)

Purpose	1976-77	1977-78	1978-79
Housing .....	3 573	3 316	4 680
Community and regional development .....	438	52	541
Protection of the environment .....	493	600	673
Recreation and related cultural services—			
Cultural facilities .....	5 768	6 584	7 626
Support for creative and performing arts .....	25	25	70
Recreational facilities .....	2 542	2 882	3 042
Other .....	1 275	819	935
Total .....	9 610	10 311	11 674
Economic services—			
General administration, regulation and research .....	2 103	7 059	4 143
Soil and water resources management .....	7 348	8 712	9 798
Forest resources management .....	4 207	5 381	6 186
Other services to agricultural and pastoral industries .....	10 577	11 657	11 967
Mining and services to mining .....	2 214	2 360	3 947
Manufacturing and services to manufacturing .....	914	1 272	1 153
Electricity supply services .....	133	168	214
Water supply services .....	1 952	2 065	2 488
Transport and communication—			
Roads and ancillary services .....	11 990	14 713	16 781
Sea transport .....	242	326	381
Urban bus services .....	6 030	6 615	6 520
Other .....	4 589	3 951	3 129
Other .....	4 879	5 999	6 851
Total .....	57 177	70 277	73 559
Other (including debt charges) .....	59 893	69 489	75 193
Total .....	395 034	450 708	492 961
Percentage increase .....	24.2	14.1	9.4

(a) Based on Australian purpose classification developed for analysis of government sector accounts; not strictly comparable with functional classifications published in Year Books prior to the 1975 edition.

### Public Debt Charges

A significant item of expenditure is public debt charges, but a high proportion is recovered from semi-government authorities. The next table shows the net burden on Consolidated Revenue Fund of debt charges:

**Public Debt Charges: Net Burden on Consolidated Revenue, Tasmania**  
(\$'000)

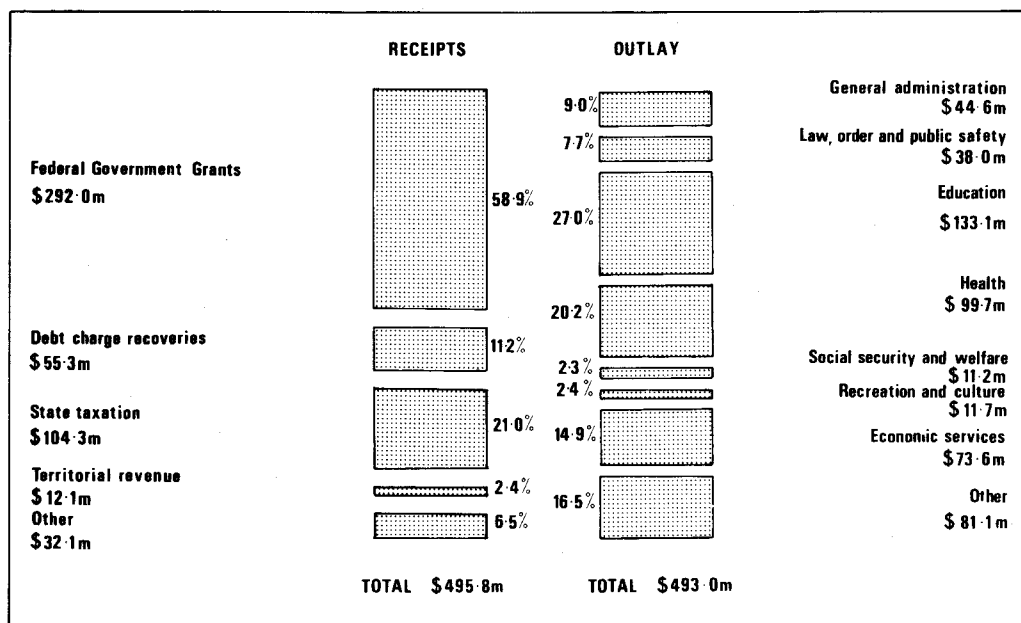
Particulars	Interest			Sinking fund contribution		
	1976-77	1977-78	1978-79	1976-77	1977-78	1978-79
Expenditure from Consolidated Revenue .....	(a) 56 211	(a) 64 215	(a) 69 344	(b) 6 869	(b) 7 535	(b) 8 224
Recovered from semi-government bodies, etc. ....	42 215	45 432	50 117	4 576	4 930	5 228
Net burden on Consolidated Revenue (c) .....	13 996	18 783	19 227	2 293	2 605	2 996

(a) Includes loan management charges.

(b) Contribution payable under the financial Agreement to the National Debt Sinking Fund.

(c) In respect of non-revenue producing assets such as schools, roads, etc.

## Consolidated Revenue Fund, Tasmania, 1978-79

*Government Transport Services*

Unlike the Consolidated Revenue Funds of some Australian states, the Tasmanian Fund excludes the gross receipts and expenditure of State business undertakings such as shipping and bus services. The principal charge in 1978-79 under this item was in respect of the net loss incurred by the Transport Commission during 1977-78 (\$3 106 697). Another major item was a contribution of \$6 520 000 to the Metropolitan Transport Trust which experienced a net trading loss of \$6 485 530 in 1978-79.

*Roads and Bridges*

The chief expenditure under this item in 1978-79 was a transfer of \$15 417 081 to the State Highways Trust Fund, representing revenue received from motor tax and public vehicles fees. Grants totalling \$3 224 160 were paid from Consolidated Revenue Fund to the Transport Commission to cover the cost of vehicle registration and traffic control.

**State Trust and Special Funds**

State revenues are payable to Consolidated Revenue with the exception of certain revenues which have been set aside by Acts of Parliament for specific purposes and which are payable into special funds or accounts at the State Treasury. The volume of these transactions is high, \$373 415 140 being received in 1978-79, \$371 598 883 being expended and the balance in the funds changing from \$18 570 963 (1 July 1978) to \$20 387 220 (30 June 1979).

It should be noted that many accounts in the Trust and Special Funds indicate Treasury transactions which merely reiterate those recorded under Consolidated Revenue and Loan Funds; the following examples are given:

**State Trust and Special Funds: Selected Accounts, Tasmania, 1978-79**  
(\$'000)

Account	Receipts	Expenditure
Income Tax Deductions Suspense Account (a) .....	51 034	51 034
Hydro-Electric Commission London Suspense Account (b) .....	320	320

- (a) Wages and salaries included under Consolidated Revenue and Loan Fund expenditure are shown at gross value; however, the deductions applicable to wage and salary earners on Tasmanian Government pay-rolls are passed, via this account to the Federal Government.
- (b) The Treasury acts as agent for meeting overseas liabilities incurred by the Hydro-Electric Commission; these liabilities, mainly incurred in the acquisition of plant and equipment, are largely accounted for in Loan Fund expenditure.

Some accounts are concerned with government activities financed by the Federal Government, the State acting as trustee or agent in the transactions; examples follow:

**State Trust and Special Funds: Selected Federal Accounts, Tasmania, 1978-79**  
(\$'000)

Account	Receipts	Expenditure
Tasmanian University (Commonwealth Grants) Account (a) .....	19 371	19 371
Recurrent Grants to Non-Government Schools Account (b) .....	4 791	4 791

- (a) Treasury passes Federal Government grants to University of Tasmania.
- (b) Treasury passes Federal Government grants to non-government schools.

In the case of some accounts, there is provision for crediting the Trust and Special Funds with contributions from Consolidated Revenue, an important example being the State Highways Trust Fund:

**State Trust and Special Funds: State Highways Trust Fund, Tasmania, 1978-79**  
(\$'000)

Item	Receipts	Expenditure
Federal Government contribution .....	23 208	-
Grants from Consolidated Revenue .....	15 417	-
Roads, bridges, jetties, ferries and planning .....	775	40 469
Self-balancing entries .....	6 267	5 774
Fund entries .....	45 667	46 244

The Forestry Fund Account records transactions under legislation requiring revenue from forestry to be paid to Consolidated Revenue, and for Consolidated Revenue to expend an equal amount on forestry in the following year:

**State Trust and Special Funds: Forestry Fund Account, Tasmania, 1978-79**  
(\$'000)

Item	Receipts	Expenditure
Grants from Consolidated Revenue (a) .....	5 615	-
Expenditure on forestry .....	-	5 625
Reimbursement, Softwood Forestry Agreement .....	9	-
Self-balancing entries .....	1 816	1 816
Fund entries .....	7 441	7 441

- (a) Consolidated Revenue recorded forestry receipts of \$5 615 060 in 1977-78; this sum therefore became the 1978-79 contribution from Consolidated Revenue.

Some of the funds held in trust are not owned by the State Government, e.g. St John's Park Inmates Trust Account. Other funds are held on behalf of semi-government authorities, e.g. the Agricultural Bank.

### State Loan Fund

Expenditure from the Loan Fund is devoted to two main purposes: (i) the making of advances to State semi-government authorities; and (ii) the carrying out of the State's own works program. Such funds, whether lent to other authorities for their works programs or spent directly by the State, result in the creation of new capital assets, a large proportion of which are revenue earning and therefore capable of reimbursing the State for the debt charges which it has incurred. (An earlier section on Consolidated Revenue expenditure shows the gross and net expenditure on annual debt charges.) In addition, conversion of existing loans is effected from the Loan Fund, but the amounts involved have been excluded from the next two tables as these transactions only alter the rates, sources or terms of existing public debt. Details of these debt servicing transactions are contained in a later table, 'Net Loan Fund Expenditure—Reconciliation'.

In addition to money from loan raisings, the Loan Fund may record other receipts such as the repayment of advances which had been made from the Fund to some Government section on Consolidated Revenue expenditure shows the gross and net expenditure on annual debt charges.) In addition, conversion of existing loans is effected from the Loan Fund, but the amounts involved have been excluded from the next two tables as these transactions only alter the rates, sources or terms of existing public debt. Details of these debt servicing transactions are contained in a later table, 'Net Loan Fund Expenditure—Reconciliation'.

In addition to money from loan raisings, the Loan Fund may record other receipts such as the repayment of advances which had been made from the Fund to some Government authorities and community organisations, and contributions to capital works by the Federal Government.

Receipts into the Loan Fund are shown in the following table:

State Loan Fund: Receipts, Tasmania  
(\$'000)

Particulars	1976-77	1977-78	1978-79
Loans raised for new capital purposes .....	63 802	66 992	66 992
Loans raised for redemption and conversion (a) .....	64 205	86 705	80 454
Non-specific grants from Federal Government .....	31 901	33 496	33 496
	159 908	187 193	180 942
Specific grants from Federal Government—			
Education .....	5 545	6 759	4 107
Health and mental health .....	4 152	4 943	6 355
Urban public transport .....	253	732	869
Other .....	74	51	42
Total .....	10 024	12 484	11 372
Payments from State sources (b)—			
Industrial Development Act .....	913	1 112	1 128
Aluminium Industry Act .....	162	—	1 500
Transport Act .....	1 744	485	466
State Advances Act .....	718	1 031	1 159
Homes Act .....	630	587	69
Tourist accommodation and facilities loans .....	205	312	299
Sale of Government properties .....	—	—	5 117
Other .....	1 742	2 716	2 267
Total .....	6 114	6 243	12 005
Total Loan Fund receipts .....	176 046	205 920	204 319

(a) For the redemption and conversion of existing loans.

(b) Payments and repayments under provisions of various State Acts.

The following table shows annual gross and net loan expenditure. The net loan expenditure for 1978-79 (\$99.2m) was 5.5 per cent less than for 1977-78.

**Loan Fund: Gross and Net Loan Expenditure, Tasmania**  
(\$'000)

Year	Loan expenditure		Year	Loan expenditure	
	Gross	Net		Gross	Net
1973-74 .....	73 947	64 603	1976-77 .....	126 316	110 178
1974-75 .....	90 182	76 056	1977-78 .....	123 647	104 920
1975-76 .....	98 895	81 369	1978-79 .....	122 544	99 167

Traditionally, loan expenditure has been recorded on both gross and net bases. The annual net loan expenditure is equal to the disbursement of borrowings during the year for new capital purposes (as distinct from borrowings for the conversion of existing debt), plus capital contributions by the Federal Government, augmented or diminished by the net movement in the Loan Fund balance. The following table shows the calculation of net loan expenditure from two viewpoints: (i) as a residue from gross loan expenditure; and (ii) as the algebraic sum of new loan raisings for new capital purposes, the net movement in the Loan Fund balance and discount and capital appreciation expenses.

**State Loan Fund: Calculation of Net Loan Expenditure, Tasmania**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
(i) Gross loan expenditure .....	126 316	123 647	122 544
Less Repayments .....	6 114	6 243	12 005
Less Federal Government specific grants .....	10 024	12 484	11 372
Net loan expenditure .....	110 178	104 920	99 167
(ii) Gross borrowings for new capital purposes .....	63 802	66 992	66 992
Federal Government non-specific grant .....	31 901	33 496	33 496
Movement in Loan Fund balance (a) .....	+14 382	+2 661	-1 414
Transfer from Accumulated Revenue Account .....	-	1 583	-
Other (b) .....	93	188	93
Net loan expenditure .....	110 178	104 920	99 167

(a) Negative sign (-) indicates an increase from opening to closing balance, plus sign (+) indicates a decrease.

(b) Discount on borrowings for conversion and re-financing purposes and capital appreciation items.

The next table shows Loan Fund payments classified according to purpose:

**Loan Fund Payments Classified by Purpose, Tasmania (a)**  
(\$'000)

Purpose	1976-77	1977-78	1978-79
General administration, <i>n.e.c.</i> .....	5 983	9 250	13 727
Law, order and public safety—			
Law courts and legal services .....	246	1 410	2 317
Correctional and custodial services .....	622	1 889	276
Police services .....	2 221	2 572	1 125
Fire protection services .....	250	80	171
Other .....	24	63	78
Total .....	3 363	6 014	3 968

**Loan Fund Payments Classified by Purpose, Tasmania (a)—continued**  
(\$'000)

Purpose	1976-77	1977-78	1978-79
<b>Education—</b>			
General administration, regulation and research .....	9 407	7 136	8 128
Primary, pre-school and secondary .....	15 182	17 396	10 767
Technical .....	4 539	3 550	4 009
Adult education .....	162	445	49
Special schools .....	528	158	234
Total .....	29 817	28 685	23 187
<b>Health—</b>			
Mental health .....	730	1 762	440
Other hospital and clinical services .....	10 143	18 144	18 117
Ambulance services .....	201	48	140
Total .....	11 074	19 954	18 696
<b>Social security and welfare—</b>			
Aged persons .....	1 112	430	101
Family and child care and assistance .....	36	116	191
Total .....	1 148	547	292
<b>Housing and home finance services .....</b>	6 709	6 024	9 459
<b>Recreation and related cultural services—</b>			
Cultural facilities .....	463	1 224	1 219
Recreational facilities .....	2 053	4 384	4 110
Total .....	2 516	5 608	5 328
<b>Economic services—</b>			
Soil and water resource management .....	250	325	980
Forest resources management .....	8 863	9 992	10 503
Services to agricultural, pastoral and fishing industries ..	2 843	2 581	4 265
Mining and services to mining .....	184	157	200
Manufacturing and services to manufacturing .....	3 697	1 907	3 993
Electricity supply .....	31 000	23 000	16 650
Water supply services .....	1 244	2 535	2 491
<b>Transport and communication—</b>			
Road and ancillary systems .....	5 697	4 075	4 873
Rail transport .....	524	1 502	1 201
Sea transport .....	—	—	14
Urban transport .....	—	732	869
Other .....	1 912	570	504
Total .....	56 214	47 377	46 543
<b>Deficit on Consolidated Revenue Fund .....</b>	9 400	—	1 250
<b>Sinking fund and redemption (incl. conversions) .....</b>	64 205	86 705	80 454
<b>Total payments from Loan Fund .....</b>	190 428	210 164	202 905

(a) Based on Australian purpose classification developed for analysis of government sector accounts; not strictly comparable with functional classification published in Year Books prior to the 1975 edition.

The following table shows how a reconciliation may be obtained between total Loan Fund payments in the previous table and net Loan Fund expenditure.

**Net Loan Fund Expenditure: Reconciliation, Tasmania**  
(*\$'000*)

Particulars	1976-77	1977-78	1978-79
Total payments from Loan Fund .....	190 428	210 164	202 905
Less Debt service transactions—			
Conversion (Australia) .....	56 911	83 264	79 401
Conversion (State Savings Bank Agreement) .....	960	960	960
Redemption from new cash borrowing .....	6 334	2 481	93
Loan Fund expenditure for new capital purposes .....	126 223	123 459	122 451
Plus Capital appreciation on special bonds .....	93	188	93
Gross Loan Fund expenditure .....	126 316	123 647	122 544
Less Total repayments to Loan Fund .....	16 138	18 727	23 377
Net Loan Fund expenditure (a) .....	110 178	104 920	99 167

(a) As specified in the Treasurer's Statement.

The *Public Account Act 1962* has, amongst other things, the following provisions relating to the Loan Fund: (i) the Governor, on Treasury advice, may make transfers between block votes as long as the total authorised amount is not exceeded; (ii) a sum of up to \$400 000 may be spent for purposes not previously authorised; (iii) for purposes previously authorised, an additional sum of up to \$1m may be spent; (iv) in instances of expenditure outside the provisions of a specific Loan Fund Appropriation Act, the ratification of such action must be sought from Parliament before the close of the following financial year. The Act also provides for the unexpended balances of votes at the close of the financial year to lapse.

### State Public Debt

Prior to 1 July 1975, the State public debt was calculated on two bases: (i) with overseas debt calculated at 'mint par of exchange' i.e. at the exchange rates prevailing on 1 July 1927; and (ii) with overseas debt calculated at current rates of exchange. 'Mint par debt' was the official debt for the purpose of determining sinking fund contributions payable under the Financial Agreement, 1927. This Agreement was amended at the end of June 1975 and a new formula was applied for determining sinking fund contributions. 'Mint par debt' is no longer used in the calculations.

The following table shows the State Public Debt at current rates of exchange:

**State Public Debt at 30 June 1979: At Current Rates of Exchange, Tasmania**

Place in which debt repayable	Amount in currency in which raised		\$Aust. at current rates of exchange	
	Currency	Debt ('000)	Conversion rate of \$A (a)	Debt (\$A'000)
Australia .....	\$A	918 827	—	918 827
London .....	£ sterling	636	£ stg 0.6152	1 234
New York .....	U.S.\$	2 124	U.S.\$ 1.1470	1 895
Canada .....	Canadian \$	509	Can. \$ 1.2891	389
Netherlands .....	Guilders	484	Guilders 2.5590	213
Total .....	..	..	..	922 559

(a) Exchange rates at 30 June 1979 for \$A1.

The growth of the public debt, expressed at current rates of exchange (as at 30 June for year shown), is shown in the following table:



**State Public Debt: Place of Flotation and Interest Payable, Tasmania**  
(\$'000)

At 30 June	Debt redeemable in—						Total debt	Interest payable
	London	New York	Canada	Switzerland	Netherlands	Australia		
1974.....	4 142	3 849	507	834	328	777 958	787 618	45 922
1975.....	3 161	3 799	498	1 117	350	824 936	833 862	49 005
1976.....	2 551	3 462	546	—	287	746 952	753 797	53 748
1977.....	2 570	3 276	537	—	292	804 336	811 012	60 437
1978.....	1 977	2 439	449	—	252	864 980	870 097	68 233
1979.....	1 234	1 895	389	—	213	918 827	922 559	73 604

A notable feature of the State Public Debt is that approximately 99 per cent of indebtedness is now domiciled in Australia. There has been a gradual change from the situation which existed a century ago when nearly all loans were financed in London.

**Public Debt Transactions**

Securities in the form of bonds, inscribed stock and debentures are issued by the Commonwealth for and on behalf of Tasmania. Under the Financial Agreement of 1927, redemption and conversion of loans is carried out by the National Debt Sinking Fund Commission.

With the amendment, in 1975, to the Agreement of 1927, a new base for the provision of Sinking Funds by the states was established. The agreement, which is to continue until 1985, provided for a base payment by Tasmania of \$7m per annum. For the period until 1985 Tasmania's contribution to the Sinking Fund is to be increased or reduced by 1.2 per cent per annum of the amount by which the public debt thereafter is increased or diminished.

The following table shows particulars of loans raised and redeemed annually during the most recent four-year period expressed at current rates of exchange. It will be observed that redemption of loans falling due in any particular year is achieved, in the main, by conversion (i.e. by renewal of the original loans on new terms and conditions).

**State Public Debt: Conversation and Redemption at Current Rates of Exchange, Tasmania**  
(\$'000)

Particulars	1975-76	1976-77	1977-78	1978-79
Loans raised for—				
New capital purposes .....	60 743	63 807	66 992	66 992
Conversion purposes .....	79 056	57 871	84 224	80 361
Redemption of maturing loans .....	12 994	6 334	2 481	93
Total raisings .....	152 792	128 012	153 697	147 446
Less Loans redeemed—				
By conversion .....	79 056	57 871	84 224	80 361
From new cash raisings .....	12 917	6 241	2 293	—
From National Debt Sinking Fund (a) .....	9 284	6 685	8 094	14 623
Debt transferred to Commonwealth (b) .....	131 600	—	—	—
Net increase in public debt .....	—80 065	57 215	59 086	52 462
Debt at end of year .....	753 797	811 012	870 097	922 559

(a) Includes a balancing item due to fluctuation in exchange rates during the year, the actual redemption being \$9 177 000 in 1975-76, \$7 213 000 in 1976-77, \$8 138 000 in 1977-78 and \$14 927 000 in 1978-79.

(b) (i) State debt of \$69 100 000 taken over by the Federal Government following amendment to the Financial Agreement of 1927.

(ii) Debt of \$62 500 000 related to railway operations transferred to the Federal Government under the Railways Transfer Agreement of 1975.

The next table summarises the transactions of the National Debt Commission in relation to the Tasmanian Public Debt:

**National Debt Commission Transactions in Respect of Tasmanian Public Debt**  
(\$'000)

Particulars	1975-76	1976-77	1977-78	1978-79
Balance at beginning of period .....	1 268	1 208	2 952	4 623
Contributions—				
From—Federal Government .....	2 100	2 069	2 225	2 386
State Government .....	7 000	6 869	7 535	8 224
Interest received (net) .....	17	19	50	152
Funds available .....	10 385	10 165	12 761	15 384
Less Redemption and re-purchase at current rates of exchange .....	9 177	7 213	8 138	14 927
Balance at end of period .....	1 208	2 952	4 623	457

The National debt Commission was established as part of the 1927 Financial Agreement and its function is to administer a single consolidated sinking fund in respect of the debt of the Federal and state governments. (The obligations of the states and the Federal Government in contributing to the consolidated sinking fund are set out earlier in this chapter in a section headed 'Payments Under the Financial Agreement (1927)').

## TAXATION

### Taxation in Tasmania

As Australian citizens, Tasmanians are subject to taxes levied both by the State and the Federal Government. The next table shows taxes (total amounts and per capita figures) collected by the State Government and semi-government authorities in Tasmania and Federal Government collections for Australia:

**Taxation: State of Tasmania and Federal Government, 1978-79 (a)**

Tax	Amount (\$'000)		Per head of population (\$)	
	Tasmania (b)	Federal Government (c)	Tasmania	Federal Government
Income (personal and company) .....	—	15 947 762	—	1 112.65
Customs and excise .....	—	5 207 727	—	363.34
Sales .....	—	1 769 840	—	123.48
Pay-roll .....	40 656	13 030	97.85	0.91
Probate and succession duties .....	5 549	82 061	13.36	5.73
Motor .....	25 200	—	60.65	—
Stamp duties .....	16 285	—	39.20	—
Land .....	4 867	—	11.72	—
Racing .....	3 971	—	9.56	—
Liquor .....	4 228	—	10.18	—
H.E.C. statutory levy .....	1 401	—	3.38	—
Levy on insurance companies for fire authorities .....	3 583	—	8.63	—
Entertainment .....	—	—	—	—
Casino tax and licence fees .....	2 640	—	6.36	—
Soccer football pools tax .....	297	—	0.72	—
Coal export duty .....	—	93 524	—	6.53
Primary production tax .....	—	283 092	—	19.75
All other .....	13	170 867	0.04	11.93
Total .....	108 690	23 567 903	261.59	1 644.29

(a) Collections from all sources, including amounts paid to special funds.

(b) State taxes collected by Tasmanian Government and other state authorities.

(c) Federal Government taxes collected for Australia as a whole.

In addition to the taxes shown in the above table Tasmanian property owners also pay rates and licence fees to local government authorities. Total rates and licence fees collected during 1978-79 amounted to \$57.2m or \$137.67 per head of mean population.

Assuming that Tasmanians contributed to Federal Government taxation in strict proportion to the relative mean populations of the State and Australia, it would be theoretically correct to add the three per capita figures (\$261.59, \$1 644.29 and \$137.67) and arrive at a figure of \$2 043.55 as the *total per capita taxation* of all levels of government on residents within the State. However, there are inaccuracies involved in this method. For a number of federal taxes (e.g. payroll tax and rates on land paid to the Federal Government by residents of the A.C.T., and coal export duty) Tasmanians pay minimal or no tax. An alternative way of examining the problem is to refer to total Federal Government taxes collected in Tasmania but this measure is unsatisfactory for a number of reasons, the chief defects being:

- (i) Central office collections of Federal Government taxation ceased at 30 June 1970 and for the income years after 1969-70 all assessments have been handled in state offices of the Taxation Department. The effects of this change are deceptive because income tax *collected in Tasmania* does not necessarily directly relate to income *earned in Tasmania* (e.g. a company with branches in Tasmania but with its head-office in Melbourne would normally submit its tax return to the Victorian Taxation Office). (The 1976 *Year Book* includes a special article on the location of control of Tasmanian business establishments—pp. 404-406.)
- (ii) Goods shipped to Tasmania will, in some cases, already have been taxed in another state in respect of customs or sales taxes. Even though other states are credited with the collection of these taxes, the fact remains that Tasmanians bear their incidence in the form of increased commodity prices. The amount of tax collected in other Australian states on goods shipped to Tasmania is not known.

### Estimated Incidence

In assessing the collection in other Australian states of two taxes affecting Tasmanians, account is taken of selected sales figures derived from the latest Retail Census (for 1973-74) which showed Tasmanian *per head* sales to be 93.2 per cent of the corresponding Australian figure. Accordingly the *per head* incidence of customs and sales taxes in Tasmania is taken to be 93.2 per cent of the Australian *per head* collection figure for each tax. Estimates are compiled using these *per head* figures and the State's mean population.

The following table shows actual collections of the Federal Government taxes in the State and also the estimated incidence of taxes (other than income tax and estate duty) collected elsewhere in Australia:

**Taxation Collected by the Federal Government in Tasmania and Elsewhere,  
and Estimated Incidence in Tasmania  
(\$'000)**

Tax	1976-77	1977-78	1978-79
Collected in Tasmania—			
Income tax (a) .....	308 595	347 815	352 763
Estate duty (a) .....	1 176	1 511	1 283
Gift duty .....	771	198	132
Stevedoring industry charge .....	1 739	1 127	1 053
Primary production taxes .....	3 360	3 486	3 969
Sales tax .....	27 730	28 456	25 411
Customs .....	8 310	8 067	11 863
Excise .....	60 082	62 777	74 359
Other .....	398	593	634

**Taxation Collected by the Federal Government in Tasmania and Elsewhere,  
and Estimated Incidence in Tasmania—continued**  
(\$'000)

Tax	1976-77	1977-78	1978-79
Total collected in Tasmania .....	412 161	454 030	471 467
Collected elsewhere in Australia (b)—			
Sales tax .....	17 241	19 215	22 405
Customs .....	23 082	22 629	24 962
Estimated incidence (c) .....	452 484	495 874	518 834

(a) Tax collected in Tasmania may not directly relate to *income earned* and *assets* in Tasmania since a multi-state return can be lodged in any one state office.

(b) Estimated; goods on which these taxes were paid are assumed to have been sold in Tasmania.

(c) Excludes company income tax collected in other states in respect of establishments operating in Tasmania.

### Federal Government Income Tax

Income tax, the most important revenue raising levy in Australia, was introduced in 1884 by the colony of South Australia. In the course of time this form of taxation was adopted by all the state governments and the Federal Government between 1884 and 1915. From 1915 to 1942 the state and Federal Governments imposed income taxation concurrently, the rate of state income tax varying from state to state. Uniform taxation on incomes throughout Australia was adopted in 1942, as a war measure, when the Federal Government became the sole authority levying this tax. However, under a new scheme introduced by the Federal Government in 1977-78, each state was given the right to impose a surcharge or grant a rebate on personal income tax in its state (see 'Personal Income Tax Sharing with the States' earlier in this chapter).

#### Income Tax Rates

Details relating to the amounts of income tax payable by companies and by individuals are included in Chapter 18.

#### Personal Income Tax Assessed in Tasmania

The next tables show the number of taxpayers, taxable income and income tax assessed during the year 1977-78 (income year 1976-77) and earlier years. The following definitions apply:

**Net Income:** Assessable income *less* deductions for expenditure incurred in earning that income (but before deductions for concessional allowances).

**Individuals (Excluding Companies):** Includes residents and non-residents assessed in Tasmania.

**Taxable Income:** Net income *less* concessional deductions in respect of dependants, life assurance, etc. up to 1974-75; net income *less* deductions for gifts to approved funds or institutions and for allowable housing loan interest for 1975-76 and 1976-77.

The following table dissects the number of taxpayers, income tax assessed, etc. by grade of net income for the income year 1976-77. Average weekly earnings per employed male unit (see Chapter 17) for Tasmania in 1976-77 were \$181.20 (equivalent to an annual salary of \$9 422).

#### Tasmania, Income Tax: Income Year 1976-77—Individuals (a)

Grade of net income	Number of taxpayers			Cumulative percentage of taxpayers	Net income	Total taxable income	Net income tax assessed
	Males	Females	Persons				
\$					\$'000	\$'000	\$'000
1- 2 999 .....	967	1 211	2 178	1.4	5 902	5 845	146
3 000- 3 999 .....	5 718	9 431	15 149	10.9	52 828	52 336	2 805
4 000- 4 999 .....	5 989	7 548	13 537	19.5	60 882	60 166	5 952

## Tasmania, Income Tax: Income Year 1976-77—Individuals (a)—continued

Grade of net income	Number of taxpayers			Cumulative percentage of taxpayers	Net income	Total taxable income	Net income tax assessed
	Males	Females	Persons				
\$					\$'000	\$'000	\$'000
5 000- 5 499 .....	3 328	3 513	6 841	23.8	35 910	35 524	4 240
5 500- 5 999 .....	3 420	3 265	6 685	28.1	38 466	37 951	4 969
6 000- 6 499 .....	3 852	3 217	7 069	32.5	44 171	43 552	6 331
6 500- 6 999 .....	4 296	3 095	7 391	37.2	49 914	49 198	7 806
7 000- 7 499 .....	5 302	3 711	9 013	42.9	65 407	64 480	10 950
7 500- 7 999 .....	5 926	3 200	9 126	48.7	70 724	69 671	12 418
8 000- 8 499 .....	6 590	2 720	9 310	54.5	76 811	75 566	14 050
8 500- 8 999 .....	6 533	2 064	8 597	60.0	75 203	73 894	14 201
9 000- 9 499 .....	6 443	1 700	8 143	65.1	75 318	73 953	14 707
9 500- 9 999 .....	6 095	1 455	7 550	69.9	73 550	72 188	14 818
10 000-10 499 .....	5 462	1 118	6 580	74.0	67 390	66 141	13 917
10 500-10 999 .....	4 622	891	5 513	77.5	59 245	58 214	12 590
11 000-11 999 .....	7 664	1 292	8 956	83.2	102 668	100 899	22 681
12 000-12 999 .....	5 965	942	6 907	87.6	86 123	84 731	20 289
13 000-13 999 .....	4 004	593	4 597	90.5	61 909	60 962	15 435
14 000-14 999 .....	3 120	449	3 569	92.7	51 640	50 854	13 570
15 000-15 999 .....	2 274	272	2 546	94.3	39 414	38 813	10 728
16 000-16 999 .....	1 608	234	1 842	95.5	30 350	29 836	8 536
17 000-17 999 .....	1 220	149	1 369	96.3	23 941	23 513	7 009
18 000-18 999 .....	943	113	1 056	97.0	19 508	19 157	5 958
19 000-19 999 .....	702	89	791	97.5	15 396	15 094	4 872
20 000-24 999 .....	1 773	227	2 000	98.8	44 269	43 372	15 219
25 000-29 999 .....	653	108	761	99.3	20 755	20 281	8 059
30 000-49 999 .....	821	109	930	99.8	34 063	33 272	15 278
50 000-99 999 .....	172	30	202	100.0	12 899	12 809	6 941
100 000 and over .....	19	11	30	100.0	4 123	4 118	2 473
Total .....	105 481	52 757	158 238	..	1 398 779	1 376 389	296 948

(a) For definitions, see text above.

## Tasmania, Income Tax: Individuals (a)

Income year	Number of taxpayers			Net income	Taxable income (b)	Net income tax assessed			Increase in the C.P.I. (c)
	Males	Females	Persons			Total	Per taxpayer		
							Amount	Increase (d)	
				\$'000	\$'000	\$'000	\$	per cent	per cent
1971-72 .....	108 171	54 860	163 031	615 567	500 856	88 239	541	19.2	6.8
1972-73 .....	99 830	44 984	144 814	660 913	539 410	92 335	638	17.8	6.0
1973-74 .....	103 903	50 815	154 718	817 976	688 577	134 109	867	35.9	12.9
1974-75 .....	105 639	56 602	162 241	1 064 186	917 430	180 392	1 112	28.3	16.7
1975-76 .....	102 881	50 044	152 925	1 230 210	1 206 315	242 312	1 585	42.5	13.0
1976-77 .....	105 481	52 757	158 238	1 398 779	1 376 389	296 948	1 877	18.4	13.8

(a) For definitions, see text above.

(b) Up to 1974-75, net income less concessional deductions in respect of dependants, etc. From 1975-76, such concessional deductions in respect of dependants, rates, life assurance, etc. were replaced by tax rebates which are deducted from gross tax payable to arrive at net tax assessed.

(c) Over the previous year for the all groups weighted average of the six capital cities index.

(d) Increase on previous year.

## State Taxation

In the section on the Consolidated Revenue Fund, taxes collected by the Tasmanian Government are shown in summarised form.

The next table gives full details of State taxation. It should be noted that certain taxes are reserved for special purposes. Examples are: (i) motor taxation—the 'motor tax' and 'public vehicle fees' components of this item (\$15 417 000 in 1978-79) are passed from Consolidated Revenue to the State Highways Trust Fund; and (ii) racing and gaming taxes—all racing and gaming taxes paid to special funds are passed to the racing clubs.

**State Taxation Collections, Tasmania (a)**  
(\$'000)

Tax	1976-77	1977-78	1978-79
Deceased persons' estates duties	6 536	5 166	5 549
Entertainment tax	93	—	—
Stamp duties (excluding bookmakers' tickets)—			
Cheques	1 178	1 221	1 377
Bills of exchange and lading	6	7	—
Hire purchase and related agreements	2 110	2 319	2 503
Loan Duty	—	—	245
Legal documents, etc.	6 270	6 047	7 384
Adhesive revenue stamps	466	556	655
Insurances	3 600	3 712	4 142
Marketable securities	157	151	224
Land tax	3 773	3 930	4 867
Motor taxation—			
Paid to—Consolidated Revenue	19 001	21 775	25 100
Special funds	311	96	100
Tax paid to fire authorities (b)	2 975	3 434	3 538
Liquor tax and related licences (c)	3 443	3 774	4 228
Racing and gaming taxes—			
Paid to—Consolidated Revenue	2 329	2 538	3 253
Adjustment (d)	+23	+299	—220
Special funds	1 022	895	938
Pay-roll tax	35 217	36 748	40 656
Hydro-Electric Commission statutory levy	1 604	585	1 401
Casino tax and licence fees	1 989	2 084	2 640
Soccer football pools tax	254	265	297
Sundry licences—			
Auctioneers and estate agents	7	1	—
Other (including Firearms Act)	12	12	13
<b>Total</b>	<b>92 376</b>	<b>95 614</b>	<b>108 890</b>
Percentage increase	17.6	3.5	13.7

(a) Collections from all sources of taxation, including amounts paid to special funds.

(b) Paid by insurance companies direct to the Fire Brigades Commission and the Rural Fires Board.

(c) See later section 'Fees and Licences under the Licensing Act' for details.

(d) For different accounting periods.

### State Land Tax

Rates of tax were changed by the *Land Tax Act 1976*. The main provisions of the Act were: (i) land tax on rural land was abolished from 1976-77 onwards; (ii) land tax was to be levied on land values, not unimproved values; (iii) exemption of tax in respect of urban land valued at \$4 699 or less, compared with the previous exemption up to \$1 999; and (iv) land valued at between \$4 700 and \$10 000 attracted less tax than previously.

The rates of land tax assessed on urban land values for the years 1976-77 and 1978-79 are shown in the following table:

**State Land Tax: Urban Land, Tasmania, 1976-77 to 1978-79**

Taxable land value bracket	Marginal tax rate (a)	Tax payable	
		On land value in bracket specified in first column	On higher figure in first column
\$	cents per \$	\$	\$
Up to 4 500	—	—	—
4 501- 15 000 (b)	1.0	105	105
15 001- 25 000	1.2	120	225
25 001- 50 000	1.4	350	575
50 001-100 000	2.0	1 000	1 575
100 001-150 000	2.5	1 250	2 825
Over 150 000	3.0	—	—

(a) Tax payable in respect of each dollar in the range specified.

(b) No tax is payable where the land value is \$4 699 or less.

The *Land Tax Act 1978* maintained the provisions detailed above and provided for a home owner's rebate. For 1978-79, home owners could claim a rebate of land tax if the land value of urban land owned was less than \$50 000. The amount of the rebate was as follows:

- (i) where the land value of the relevant land was not more than \$30 000, the full amount of land tax otherwise payable; and
- (ii) where the land value of the relevant land was from \$30 001 to \$50 000, \$295 less \$14.75 for each full \$1 000 by which the land value exceeded \$30 000.

**State Land Tax: Value of Taxable Properties and Tax Assessed, Tasmania**  
((\$'000))

Year	Gross unimproved value				Gross land value of urban land	Tax assessed			
	Urban	Rural	Compo-site (a)	Total		Urban	Rural	Compo-site (a)	Total
1973-74 .....	310 740	20 860	29 724	361 324	n.a.	2 522	177	335	3 035
1974-75 .....	359 069	25 113	32 123	416 304	n.a.	3 167	221	416	3 803
1975-76 .....	414 793	29 109	33 305	477 207	n.a.	3 776	256	393	4 425
1976-77 (b) .....	..	..	..	..	334 866	3 800	-	-	3 800
1977-78 .....	..	..	..	..	452 356	4 771	-	-	4 771
1978-79 .....	..	..	..	..	612 636	5 494	-	-	5 494

(a) Properties made up of both urban and rural land.

(b) From 1976-77 onwards land tax on rural land was abolished. Land tax is now levied on land value *not* unimproved value.

In October 1979, the State Treasurer announced that no land tax would be payable in respect of land on which is situated the owner's principal residence, regardless of its value, from 1979-80. This provision was included in the *Land Tax Act 1979* which fixed the following rates of land tax in respect of taxable urban land for 1979-80:

**State Land Tax: Urban Land, Tasmania, 1979-80 (a)**

Taxable land value bracket	Marginal tax rate (b)	Tax payable	
		On land value in bracket specified in first column	On higher figure in first column
\$	cents per \$	\$	\$
0- 5 000 (c) .....	0.10	5.00	5.00
5 001- 15 000 .....	0.50	50.00	55.00
15 001- 25 000 .....	0.75	75.00	130.00
25 001- 50 000 .....	1.00	250.00	380.00
50 001- 75 000 .....	1.25	312.50	692.50
75 001-100 000 .....	1.50	375.00	1 067.50
100 001-125 000 .....	1.75	437.50	1 505.00
125 001-150 000 .....	2.00	500.00	2 005.00
150 001-200 000 .....	2.25	1 125.00	3 130.00
200 001-250 000 .....	2.50	1 250.00	4 380.00
Over 250 000 .....	2.75		

(a) No tax is payable in respect of land on which is situated the owner's principal residence.

(b) Tax payable in respect of each dollar in the range specified.

(c) No tax payable where the land value is \$4 999 or less.

**State Deceased Persons' Estate Duties**

The legislation dealing with State deceased persons' estate duties is contained in the *Deceased Persons' Estates Duties Act 1931* (as amended).

No estate duty has been payable on estates in Tasmania passing to a deceased's spouse since 1 January 1979.

Estate duties on estates passing to a deceased's children or grandchildren were abolished from 1 January 1980.

The following table gives details of assessments for 1978-79:

**State Deceased Persons' Estate Duties**  
**Number of Estates, Net Value and Tax Assessed, Tasmania, 1978-79**

Grade of dutiable value	Estates		Net value as assessed	Total duty assessed (a)	Average duty per taxable estate
	Examined	Taxable			
	no.	no.	\$'000	\$'000	\$
1- 500 .....	25	2	4	—	70.5
501- 1 000 .....	11	—	9	—	—
1 001- 1 500 .....	11	2	13	—	31.0
1 501- 2 000 .....	5	1	6	—	47.0
2 001- 3 000 .....	24	2	58	—	21.0
3 001- 4 000 .....	33	—	112	—	—
4 001- 5 000 .....	29	2	121	—	43.5
5 001- 6 000 .....	27	3	137	—	28.0
6 001- 8 000 .....	68	15	452	3	206.9
8 001- 10 000 .....	61	14	547	5	338.4
10 001- 15 000 .....	214	64	2 428	35	547.6
15 001- 20 000 .....	209	125	3 288	74	588.4
20 001- 30 000 .....	378	237	8 649	300	1 265.3
30 001- 40 000 .....	275	193	8 360	422	2 189.0
40 001- 50 000 .....	171	107	6 735	357	3 341.0
50 001-100 000 .....	302	231	17 088	1 324	5 731.0
100 001-150 000 .....	95	81	8 450	1 051	12 979.8
150 001 and over .....	93	86	14 581	2 519	29 285.6
Adjustments .....	—	—	—	-124	..
Total .....	2 031	1 165	71 039	5 967	..

(a) Rates of duty and levels of exemption vary according to the class of beneficiary and the type of asset contained in the estate (details may be obtained from the Public Trustee).

### Motor Taxation

The chief components of motor taxation are: (i) motor tax assessed on a power-weight formula; (ii) vehicle registration fees; (iii) drivers' and riders' licences; and (iv) other registration fees mainly related to public vehicles.

Details of motor taxation collections are shown in the following table:

**State Motor Taxation, Tasmania**  
**(\$'000)**

Particulars	1976-77	1977-78	1978-79
Motor tax .....	10 251	12 384	14 388
Public vehicle fees (a) .....	880	1 091	1 129
Stamp duty on—Third party insurance .....	440	456	468
Vehicle registration .....	3 407	3 655	4 265
Other traffic fees (b) .....	4 124	4 284	4 950
Total .....	19 102	21 870	25 200
Paid into Consolidated Revenue Fund .....	19 001	21 775	25 100
Retained by Transport Commission .....	101	96	100

(a) Includes public vehicle fees retained by Transport Commission.

(b) Includes registration fees, licences, number plate charges, transfer fees and learners' permits.

'Motor tax' plus most of the item 'public vehicle fees' shown in the above table are paid to the State Highways Trust Fund. (The amount paid over in 1978-79 was \$15 417 000.)

### Fees and Licences under the Licensing Act

The State raises revenue from hotels, clubs, restaurants and liquor wholesalers by: (i) licensing; and (ii) imposing 'percentage fees' based on turnover for the year *preceding* collection.



**Fees and Related Licences Collected Under the Licensing Act, Tasmania**  
(\$'000)

Fees	1976-77	1977-78	1978-79
Percentage fees (a)—			
General, club, on-licences .....	2 825	3 249	3 506
Off-licences .....	580	508	691
Other fees .....	39	18	31
Total .....	3 443	3 774	4 228

(a) Based on liquor purchases by hotels and direct sales by wholesalers to the public.

**Gambling Taxation**

The following table shows gambling turnover for recent years:

**Turnover from the Major Forms of Legal Gambling, Tasmania**  
(Source: Tasmanian Racing and Gaming Commission)  
(\$ million)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Racing—						
T.A.B. ....	..	7.6	27.0	33.0	38.6	41.8
On-course tote .....	1.6	1.7	2.0	2.3	2.3	2.2
Bookmakers .....	62.0	63.0	42.0	47.7	47.5	47.3
Total racing turnover .....	63.6	72.3	71.0	83.0	88.4	91.3
Casino .....	29.1	31.0	34.4	40.5	44.0	p 50.6
Tattersalls & Tattslotto .....	1.5	1.9	2.1	6.9	11.0	16.9
Soccerpools .....	..	..	0.4	0.9	0.9	1.0
Raffles .....	n.a.	n.a.	n.a.	n.a.	n.a.	(a) 2.2
Other minor gambling (a) (b) .....	n.a.	n.a.	n.a.	n.a.	7.0	9.5
Total gambling turnover .....	n.a.	n.a.	n.a.	n.a.	n.a.	p 171.5

(a) Estimates only.

(b) Lucky envelopes, bingo, punch boards, etc.

**Racing Taxation:** Amendments to the *Racing and Gaming Act* in 1974 established the Totalisator Agency Board from January 1975, operating both on and off course totalisator betting, and restricted the operations of licensed bookmakers to on-course betting only. (For further details on the rates of taxation on racing, see the 1977 *Year Book*.)

Details of racing taxation collections and distribution for recent years are shown in the next table:

**State Racing Taxation: Collection and Distribution, Tasmania**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
<b>RACING TAXATION RECEIPTS</b>			
Totalisator tax (a) .....	2 069	2 395	2 502
Bookmakers' commission and licences .....	1 234	1 274	1 407
Stamp duty on bookmakers' tickets .....	71	56	53
Refunds .....	—	6	9
Total .....	3 374	3 732	3 971

**State Racing Taxation: Collection and Distribution, Tasmania—continued**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
DISTRIBUTION OF RACING TAXATION RECEIPTS			
Paid into Consolidated Revenue Fund .....	2 329	2 538	3 253
Adjustment (b) .....	+23	+299	-220
Commission payable to racing clubs .....	1 022	895	938
Total .....	3 374	3 732	3 971

(a) Includes amounts received by the Racing and Gaming Commission for payment to Consolidated Revenue. Excludes amounts retained by the Totalisator Agency Board.

(b) An adjustment item is necessary to reconcile items referring to different accounting periods.

**State Taxation on Lotteries:** From 1942 (when the Federal Government became the sole collector of income tax), lotteries conducted from Hobart by Tattersalls (George Adams Estate) were Tasmania's chief source of revenue through State taxation. On 14 July 1954, the promoters transferred their operations to Victoria. A new organisation—Tasmanian Lotteries—was granted a licence and operated until 30 September 1961, when the proprietor surrendered the licence. No operator is now licensed.

In September 1960, the *Racing and Gaming Act 1952* was amended to permit agreements with other states for the sale of their lottery tickets in Tasmania. Under an agreement with the Victorian Government, Tattersalls was allowed to sell tickets through accredited Tasmanian representatives; the Victorian Government was to pay quarterly to the Tasmanian Government 15½ per cent of the value of subscriptions made as a result of this concession.

The following table shows the payments made under the interstate agreement for recent years:

**Payments to Tasmanian Government Based on Sale of Tattersalls Lottery Tickets**  
(\$)

Year	Amount	Year	Amount
1973-74 .....	227 770	1976-77 .....	(a) 1 065 487
1974-75 .....	300 810	1977-78 .....	1 695 564
1975-76 .....	330 660	1978-79 .....	2 536 158

(a) Includes \$135 533 due for the year 1975-76 but not received until July 1976.

**Casino Tax and Licence Fees:** The rate of casino tax and the licence fee were established by an agreement made in September 1968 between the State Treasurer, Federal Hotels Ltd and Australian National Hotels Ltd. The agreement was ratified by the *Wrest Point Casino Licence and Development Act 1968*. The casino tax is calculated according to a graduated scale based upon monthly gross profit and is payable monthly. Initially, rates ranged from five per cent of gross profit where that profit was less than \$25 000 for the month to 30 per cent where the gross profit exceeded \$125 000. The licence fee was fixed at \$2 500 per month.

Early in 1975 the State Government received a submission from Australian National Hotels Ltd for changes in the tax scale. As a result, the effective maximum rate of tax was reduced to 25 per cent. This reduction was effected, from 1 June 1975 to 30 November 1976, by the remission of one sixth of the tax paid through an appropriation from Consolidated Revenue. An amendment to the Act passed in November 1976 reduced the actual maximum rate of tax to 25 per cent. In this Chapter, taxation receipts have been recorded *net* of the remission of casino tax and, consequently, total receipts and expenditure for Consolidated Revenue are slightly less than the totals recorded by the State Treasurer.

Details of casino taxation collections are shown in the following table:

**Casino Tax and Licence Fees, Tasmania**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
Casino tax .....	1 959	2 054	2 610
Licence fee .....	30	30	30
Total .....	1 989	2 084	2 640

(a) Total tax paid \$1 975 000; amount of remission \$329 000.

#### Further References

*ABS Publications Produced by the Canberra Office*

Public Authority Finance: State and Local Government Finance, Australia (5504.0) (annual, 1978-79 issue released 9.9.80, 128 pp.).

Taxation Revenue, Australia (5506.0) (annual, 1978-79 released 13.6.80, 39 pp.).

#### Other Publications

*Report of the Auditor-General and the Statement of Public Accounts* (published annually by the Tasmanian Government Printer, Hobart)

## Chapter 6

### DEMOGRAPHY

#### POPULATION

##### Introduction

##### *Census of 30 June 1976*

Detailed analysis of the population according to its principal characteristics as at the Census of 30th June 1976 is included in the 1979 *Year Book* (pp. 124 to 132) but not in this edition. A table showing employed persons at 30 June 1976 by occupational groupings was not included in the 1979 *Year Book* but is included in the 1980 edition in the section 'Occupation of the Population.'

##### *Census Post-Enumeration Surveys*

Post-enumeration surveys designed to measure the degree of error were conducted after both the 1976 and 1971 censuses. Net under-enumeration was derived by comparing results from the Census and the post-enumeration survey for the same individuals, and identifying omissions and duplications in the Census.

Tasmania's under-enumeration was found to be 1.116 per cent in the 1976 Census (2.709 per cent for Australia). There was a significant increase in the level of under-enumeration nationally compared with the 1971 Census. Therefore, it was decided to adjust the 1976 population count for each state and territory. The local government area, statistical division and sub-division and urban centre figures have also been adjusted, though figures for bounded localities and collection districts have not been adjusted.

##### *Source of Population Figures*

There are two principal methods by which population figures are obtained: (i) by census count; and (ii) intercensal estimates based on the application of vital and migration statistics to census based data. The second method involves taking account of *natural increase* (excess of births over deaths) and *net migration* (excess of arrivals over departures) and applying these net figures to information obtained from an earlier census, the result being termed an intercensal estimate. After each census, the estimates for the newly-completed intercensal period are revised to adjust for the difference between the new census result and the comparable estimate.

Censuses were conducted by the State in 1841, 1847, 1851, 1857, 1861, 1870, 1881, 1891 and 1901; the Australian Statistician became responsible for censuses with the establishment of the Commonwealth Bureau of Census and Statistics (now the Australian Bureau of Statistics) and conducted them in 1911, 1921, 1933, 1947, 1954, 1961, 1966, 1971 and 1976.

##### Comparison With Other States

The following table compares the Tasmanian population at censuses from 1901 with that of other states and territories (full-blood Aborigines are included from 1966):

**Australia: Census Populations of States and Territories (a) (b)**  
(**'000 Persons**)

State or territory	1901	1933	1947	1954	1961	1966 (b)	1971 (c)	1976 (c)
N.S.W. ....	1 355	2 601	2 985	3 424	3 917	4 238	4 679	4 914
Victoria ....	1 201	1 820	2 055	2 452	2 930	3 220	3 520	3 746
Queensland ....	498	947	1 106	1 318	1 519	1 674	1 881	2 112
S.A. ....	359	581	646	797	969	1 095	1 185	1 262
W.A. ....	184	439	502	640	737	848	1 043	1 170
Tasmania ....	172	228	257	309	350	371	390	407
N.T. ....	5	5	11	17	27	57	92	101
A.C.T. (d) ....	—	9	17	30	59	96	146	203
Australia ....	3 774	6 630	7 579	8 987	10 508	11 599	12 937	13 915

(a) Censuses of 1911 and 1921 are not shown.

(b) Includes full-blood Aboriginals from 1966.

(c) Adjusted for under-enumeration. Census figures up to 1966 are as recorded.

(d) Part of N.S.W. prior to 1911.

The average annual (compound) increase in population for Tasmania from 1971 to 1976 (based on adjusted population) was 0.85 per cent. The corresponding Australian annual rate of population increase was 1.47 per cent.

**Interstate Arrivals and Departures**

From 1 January 1979 the Tasmanian Office of the Australian Bureau of Statistics has ceased collection of its series of recorded interstate and overseas arrivals and departures. The Tasmanian State Department of Tourism has, in the meantime, developed a series, commencing from the September quarter of 1971, paralleling the Bureau's collection but with a different basis. It is the Department of Tourism's figures which are published in this issue.

The table below shows recorded arrivals and departures of interstate passengers travelling either by air or sea. The following persons are *not* included: passengers under three years of age, accompanied by an adult; passengers travelling on chartered flights with minor carriers; passengers travelling on private or VIP flights; and passengers arriving or departing on overseas ships.

**Recorded Interstate Arrivals and Departures: Tasmania (Source: Department of Tourism)**

Year	Arrivals	Departures	Quarter ending	Arrivals	Departures
1974. ....	508 449	502 488	1978—31 December.	153 965	136 068
1975. ....	510 639	514 278	1979—31 March. ...	161 891	175 878
1976. ....	509 356	507 384	30 June. ....	132 272	140 949
1977. ....	538 665	530 535	30 September	124 309	120 737
1978. ....	557 275	559 293	31 December.	157 578	137 276
1979. ....	576 050	574 840	1980—31 March. ...	166 734	181 528

**Population in Local Government Areas**

The next table shows the population in local government areas, statistical divisions and sub-divisions for the censuses of 1961, 1966, 1971 and 1976, and the estimated population for 1979:

**Population in Local Governments Areas and Statistical Divisions at 30 June**

Local government area (statistical division and sub-division in bold type)		Census (a)				Estimated (b)
		1961	1966	1971	1976	1979
Hobart (H) .....	(H)	54 021	53 257	52 410	50 570	49 470
Glenorchy (H) .....	(H)	35 682	39 053	42 630	42 600	42 550
Clarence (H) .....	(H)	23 140	30 236	37 090	42 360	44 690
Brighton (H) (S) .....	(H) (S)	2 115	2 207	2 330	4 970	7 090
Kingborough (H) (S) .....	(H) (S)	10 025	10 322	10 810	13 940	16 120
New Norfolk (H) (S) .....	(H) (S)	10 217	10 315	10 610	10 240	10 320
Sorell (H) (S) .....	(H) (S)	2 878	3 309	3 630	4 350	4 770
Bothwell (S) .....	(S)	1 288	1 008	810	840	820
Bruny (S) .....	(S)	504	400	310	320	320
Esperance (S) .....	(S)	3 436	3 740	3 510	3 180	3 130

Population in Local Government Areas and Statistical Divisions at 30 June—continued

Local government area (statistical division and sub-division in bold type)	Census (a)				Estimated (b)
	1961	1966	1971	1976	1979
Glamorgan (S) .....	1 128	1 125	1 120	1 330	1 370
Green Ponds (S) .....	969	880	880	870	900
Hamilton (S) .....	4 178	4 329	4 060	3 550	2 850
Huon (S) .....	5 460	5 264	4 750	4 870	4 890
Oatlands (S) .....	2 691	2 501	2 130	2 210	2 200
Port Cygnet (S) .....	2 754	2 550	2 070	2 060	2 090
Richmond (S) .....	1 673	1 658	1 580	1 690	1 730
Spring Bay (S) .....	1 155	1 205	1 410	1 770	1 830
Tasman (S) .....	1 108	1 126	1 030	950	930
<b>HOBART</b> .....	<b>130 236</b>	<b>141 311</b>	<b>153 140</b>	<b>162 660</b>	<b>168 480</b>
<b>SOUTHERN</b> .....	<b>34 186</b>	<b>33 174</b>	<b>30 030</b>	<b>30 010</b>	<b>29 590</b>
Launceston .....	38 118	37 217	35 090	33 080	32 390
Beaconsfield .....	8 550	9 983	10 970	12 550	13 620
Deloraine .....	5 574	5 205	4 810	4 820	4 840
Evandale .....	1 608	1 554	1 460	1 600	1 730
George Town .....	3 677	5 101	6 030	6 790	7 240
Lilydale .....	6 744	7 841	8 300	8 830	9 010
Longford .....	6 762	5 354	5 140	5 430	5 610
St Leonards .....	11 032	13 660	16 080	18 400	19 620
Westbury .....	4 581	4 964	4 860	5 530	5 890
<b>Tamar</b> .....	<b>86 646</b>	<b>90 879</b>	<b>92 740</b>	<b>97 030</b>	<b>99 950</b>
Campbell Town .....	1 893	1 753	1 640	1 620	1 560
Fingal .....	4 475	3 791	3 440	2 930	2 830
Flinders .....	1 407	1 234	970	980	980
Portland .....	1 274	1 391	1 500	1 650	1 770
Ringarooma .....	3 056	2 866	2 470	2 260	2 220
Ross .....	672	617	540	550	550
Scottsdale .....	3 417	3 628	3 610	3 980	4 120
<b>North Eastern</b> .....	<b>16 194</b>	<b>15 280</b>	<b>14 170</b>	<b>13 970</b>	<b>14 030</b>
<b>NORTHERN</b> .....	<b>102 840</b>	<b>106 159</b>	<b>106 910</b>	<b>111 000</b>	<b>113 980</b>
Burnie .....	16 745	18 611	19 940	19 620	19 470
Circular Head .....	7 733	7 884	7 980	7 770	7 750
Devonport .....	14 276	16 758	19 790	21 550	22 340
Kentish .....	4 167	5 614	5 320	4 110	3 950
King Island .....	2 784	2 462	2 790	2 750	2 680
Latrobe .....	4 367	4 807	5 110	5 570	5 790
Penguin .....	4 673	4 677	4 790	5 020	5 220
Ulverstone .....	9 365	10 150	11 050	12 190	12 790
Wynyard .....	8 835	9 564	10 600	11 680	12 110
<b>North Western</b> .....	<b>72 945</b>	<b>80 527</b>	<b>87 370</b>	<b>90 260</b>	<b>92 100</b>
Gormanston .....	507	540	490	400	290
Queenstown .....	4 624	4 393	5 120	4 720	4 160
Strahan .....	565	470	450	440	430
Waratah .....	367	698	1 940	2 080	2 220
Zeehan .....	3 191	3 489	4 360	5 220	5 920
<b>Western</b> .....	<b>9 254</b>	<b>9 590</b>	<b>12 360</b>	<b>12 860</b>	<b>13 020</b>
<b>MERSEY-LYELL</b> .....	<b>82 199</b>	<b>90 117</b>	<b>99 730</b>	<b>103 120</b>	<b>105 120</b>
Migratory .....	879	675	410	570	530
<b>TASMANIA</b> .....	<b>350 340</b>	<b>371 436</b>	<b>390 220</b>	<b>407 360</b>	<b>417 700</b>
Launceston Statistical District (c) .....	n. a.	n. a.	n. a.	82 330	84 910

(a) Census figures for 1961 and 1966 are as recorded; 1971 and 1976 Census figures have been adjusted for under-enumeration.

(b) Estimated by taking account of dwelling completions, electoral roll and child endowment counts, information supplied by Council Clerks and other considerations.

(c) Delineated in 1976.

## Urban and Rural Population

*Distinction Between Urban and Rural*

After the Censuses of 1954 and 1961, the Commonwealth Statistician published a population classification using the terms 'metropolitan', 'urban', and 'rural'. Delineation of the urban boundaries was subjective and the methods used were not completely comparable between states.

In order to develop an objective definition of 'urban' and 'rural' areas, Dr G. J. R. Linge of the Australian National University was commissioned by the Commonwealth Statistician to make a report.

At the 31st Conference of Statisticians in 1969, the following resolutions relating to the delimitation of urban areas based substantially on Dr. Linge's report were passed:

- (i) At each Census a boundary shall be defined for each population cluster of 1 000 or more population (special rules apply to known holiday resorts). These clusters are to be known as urban centres, and are moving boundaries which are to be adjusted after each Census.
- (ii) Around each urban centre with a population of at least 100 000, a further boundary shall be defined to contain the anticipated urban development for a period of at least 20 years. This boundary which is fixed, should delimit an area which is socially and economically oriented towards the urban centre.
- (iii) In delimiting urban centres with 25 000 or more population, all contiguous census collection districts which have a population density of 200 or more persons per square kilometre shall be included (subject to certain special rules).
- (iv) Urban centres with less than 25 000 population shall be delimited subjectively (e.g. by the inspection of aerial photographs, by field inspection, etc.).

*Revised Criteria, 1976*

For the 1976 Population Census, the statisticians agreed that the concept of *inner* and *outer* boundary be adopted for all towns and cities with populations of 25 000 or more persons. (Previously this concept was only applied to cities with a population of at least 100 000). This decision affected Tasmania since the Launceston area met these criteria. The Launceston Statistical District was therefore established. (Although neither Burnie nor Devonport currently meet these criteria as individual urban centres, the criteria are met if the area is considered a single entity with twin foci. As a result the Burnie-Devonport Statistical District has been delineated and data for this district will be available following the 1981 Census of Population and Housing).

*Populations Centred on Hobart and Launceston*

Populations centred on Hobart and Launceston are compiled and published on a two boundary basis for each centre. For Hobart the two boundary concept was introduced in 1966; for Launceston in 1976. The boundaries are:

- (i) A fixed outer boundary to enclose expected urban growth over the next 20 to 30 years. For Hobart this is the Hobart Statistical Division which is broadly the cities of Hobart and Glenorchy, Clarence municipality and parts of Kingborough, New Norfolk, Brighton and Sorell municipalities. The comparable Launceston area is the Launceston Statistical District comprising the city of Launceston and parts of seven neighbouring municipalities. See Chapter 2 for maps of the two areas.
- (ii) A moving inner boundary which moves out towards the fixed outer boundary as urban growth occurs. Urban Hobart comprises the contiguous urban portions of the cities of Hobart and Glenorchy and of the municipalities of Clarence and Kingborough. It stretches from Granton in the north to Taroona in the south on the western shore of the Derwent and on the eastern shore from Risdon Vale southward to Tranmere and Rokeby. Urban Launceston is the continuous area of urban development centred on Launceston City and includes parts of the municipalities of Beaconsfield, Westbury, Evandale, St Leonards and Lilydale.

The following tables give details of the components of the Hobart Statistical Division and the Launceston Statistical District:

**Population of Hobart Statistical Division**

Components	Census 30 June 1966 (a)	Census 30 June 1971 (a)	Census 30 June 1976 (b)
Urban Hobart .....	119 469	129 928	132 027
Other urban centres—			
Urban New Norfolk .....	5 770	6 839	6 827
Urban Kingston-Blackmans Bay .....	3 263	3 688	6 398
Urban Sorell-Midway Point .....	1 652	2 029	2 231
Urban Lauderdale .....	916	1 329	1 923
Urban Bridgewater .....	(c)	(c)	2 811
Urban Dodges Ferry .....	(d)	(d)	(e) 442
Total other urban .....	11 601	13 885	20 632
Total Urban .....	131 070	143 813	152 659
Rural .....	10 241	9 403	10 001
Total Hobart Statistical Division .....	141 311	153 216	162 660

(a) As recorded.

(b) Adjusted for under-enumeration.

(c) Population of less than 1 000 persons and thus not classified as an urban centre.

(d) Population of less than 1 000 persons and failed to meet the housing density criterion used for holiday resorts.

(e) Although the population was less than 1 000 persons at 30 June 1976, Dodges Ferry has been included as urban in 1976 because the housing density criterion, used for holiday resorts, has been met.

**Population of Launceston Statistical District**

Components	Census 30 June 1966 (a)	Census 30 June 1971 (a)	Census 30 June 1976 (b)
Urban Launceston .....	60 456	62 241	63 629
Other urban centres—			
Urban Beauty Point .....	873	869	1 034
Urban George Town .....	4 086	4 838	5 413
Urban Longford .....	1 688	1 713	1 825
Urban Perth .....	1 002	1 112	1 166
Total other urban .....	7 649	8 532	9 438
Total urban .....	—	—	73 067
Rural .....	n.a.	n.a.	9 263
Total Launceston Statistical District (c) .....	n.a.	n.a.	82 330

(a) Figures as recorded.

(b) Adjusted for under-enumeration.

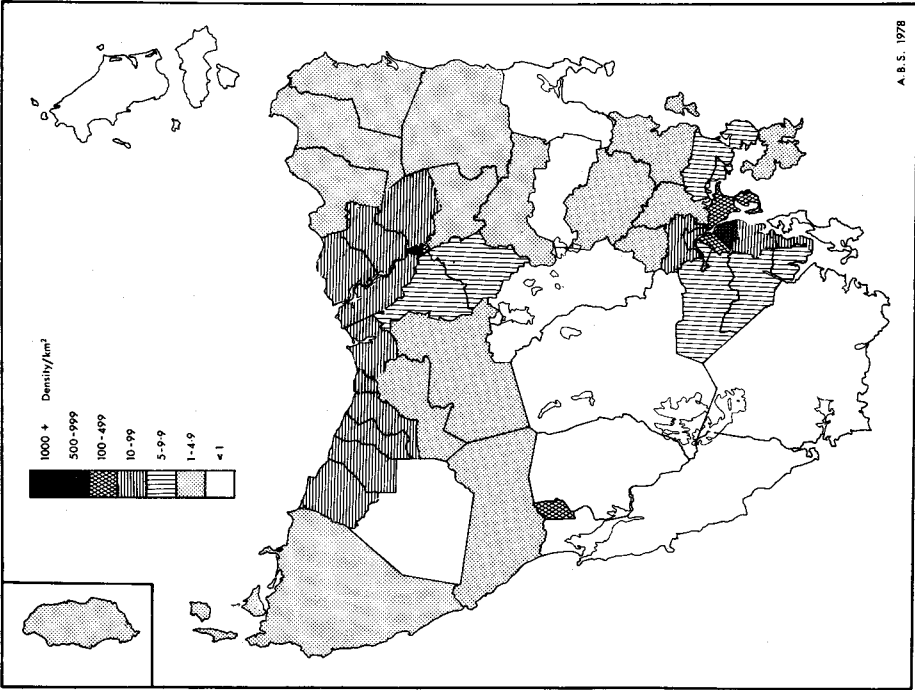
(c) Delineated in 1976.

**Details of Urban Centres and Bounded Localities**

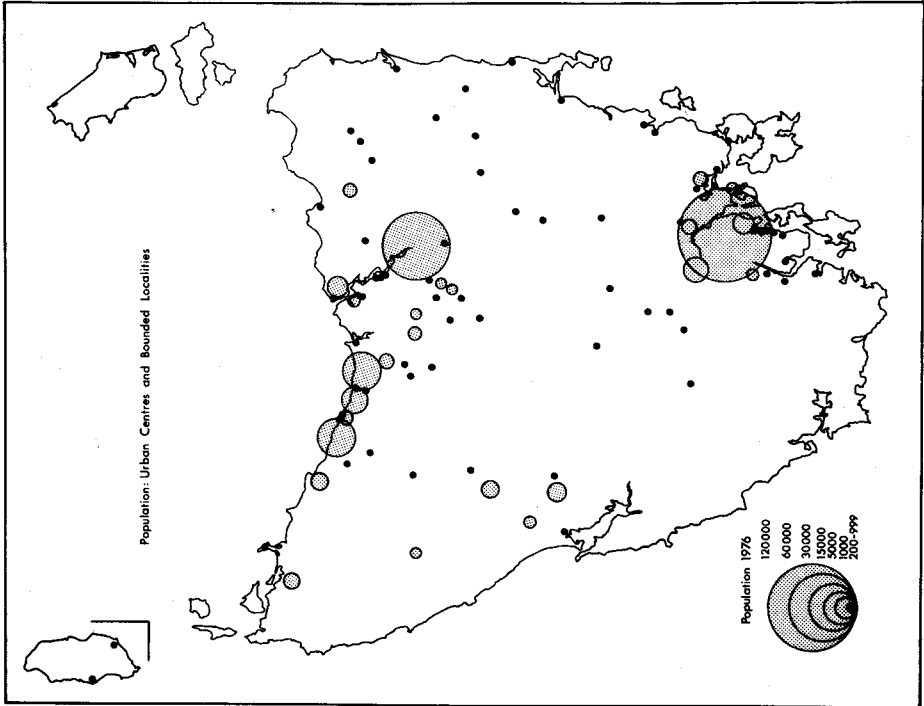
The 1979 edition of the *Year Book* includes a table (page 120) which sets out the urban and rural populations of each Tasmanian local government area at the Census of 30 June 1976. The next table shows the population of each urban centre and bounded locality as determined at the 1971 and 1976 Censuses. Population clusters of over 1 000 persons are classified as urban centres; in the case of urban centres with a population of 25 000 or more, only those continuous areas having a population density of 200 or more persons per square kilometre are included (special rules have been applied in the case of holiday resorts where housing density is taken into account).



Population Density: Tasmanian Municipalities, 1979



Populations of Urban Centres, 1976



Population of Urban Centres and Bounded Localities (a) at Censuses of 30 June 1971 and 1976

Urban centre or bounded locality	1971 census (b)	1976 census (c)	Urban centre or bounded locality	1971 census (b)	1976 census (c)
Avoca .....	251	207	Luina .....	458	521
Beaconsfield .....	950	936	Margate .....	353	392
Beauty Point .....	869	1 034	Maydena .....	527	537
Bicheno .....	284	414	Mole Creek .....	287	300
Bothwell .....	386	389	New Norfolk .....	6 839	6 827
Bracknell .....	274	271	Oatlands .....	548	553
Branxholm .....	262	275	Orford .....	312	351
Bridgewater .....	229	2 811	Penguin .....	2 294	2 558
Bridport .....	591	725	Perth .....	1 112	1 166
Burnie-Somerset .....	20 087	19 189	Poatina .....	216	213
Campbell Town .....	916	936	Pontville .....	482	809
Carrick .....	..	227	Port Sorell .....	564	772
Cremorne .....	..	259	Queenstown .....	5 025	4 620
Cressy .....	630	621	Railton .....	933	926
Currie .....	913	861	Richmond .....	491	515
Cygnets .....	708	720	Ridgley .....	474	513
Deloraine .....	1 812	1 884	Ringarooma .....	270	287
Derby .....	243	202	Rosebery .....	2 380	2 590
Devonport .....	18 183	19 473	Ross .....	279	301
Dodges Ferry .....	..	442	Rossarden .....	624	291
Dover .....	462	408	St Helens .....	825	817
Dunalley .....	270	247	St Marys .....	745	677
Electrona .....	243	251	Savage River .....	1 116	1 212
Evandale .....	472	529	Scottsdale .....	1 815	1 855
Exeter .....	324	347	Seven Mile Beach .....	343	464
Fingal .....	446	430	Sheffield .....	795	833
Forth .....	338	227	Smithton .....	3 208	3 307
Franklin .....	587	530	Snug .....	530	668
Geeveston .....	958	900	Sorell-Midway Point .....	2 029	2 231
George Town .....	4 838	5 413	Stanley .....	715	650
Gormanston .....	409	358	Strahan .....	429	416
Grassy .....	767	718	Strathgordon .....	1 270	912
Gravelly Beach .....	466	522	Sulphur Creek .....	421	401
Hadspen .....	395	619	Swansea .....	372	376
Hamilton .....	212	222	Tarraleah .....	524	495
Heybridge .....	388	378	Triabunna .....	591	881
Hobart .....	129 928	132 027	Tullah .....	..	267
Huonville-Ranelagh .....	1 317	1 370	Turners Beach .....	461	659
Kettering .....	232	285	Ulverstone .....	8 009	8 988
Kingston-Blackmans Bay .....	3 688	6 398	Waratah .....	217	246
Lanena-Blackwall .....	464	455	Westbury .....	965	1 028
Latrobe .....	2 464	2 428	Westerway .....	255	202
Lauderdale .....	1 329	1 923	Woodbridge .....	327	300
Launceston .....	62 241	63 629	Wynard .....	4 006	4 444
Lilydale .....	307	316	Yolla .....	..	205
Longford .....	1 713	1 825	Zeehan .....	1 471	1 793
Low Head .....	263	275			

(a) Bounded localities are population clusters of 200 to 999 persons.

(b) As recorded.

(c) Urban centres (localities with 1 000 or more persons recorded at Census) have been *adjusted* for under-enumeration. Localities with less than 1 000 persons are *as recorded*.

## VITAL STATISTICS

### Summary of Principal Statistics, Tasmania

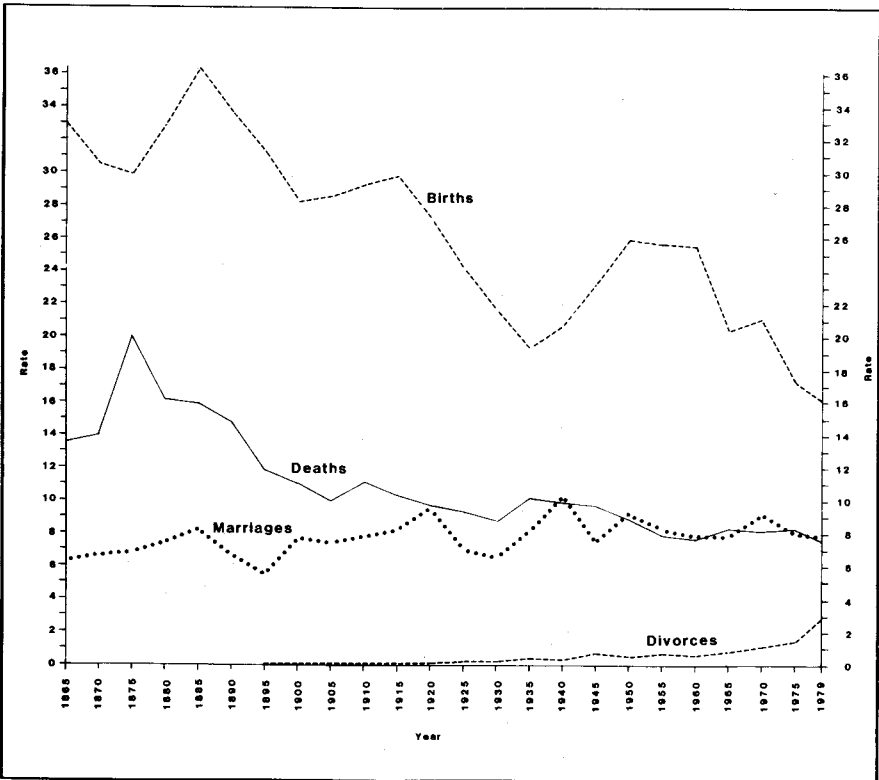
Vital statistics (births, deaths and marriages) are compiled from details registered with the Registrar-General of Tasmania and refer to registrations processed during the periods specified. The principal number and rates relating to vital statistics in Tasmania for recent years are given in the following table:

Summary of Vital Statistics, Tasmania

Year	Number registered				Rate per 1 000 of mean population			Infant mortality (deaths under one year per 1 000 live births)
	Marriages	Live births	Deaths	Infant deaths (a)	Marriages	Live births	Deaths	
1974.....	3 567	7 398	3 484	123	8.93	18.51	8.72	16.6
1975.....	3 242	6 982	3 340	128	8.01	17.26	8.26	18.3
1976.....	3 477	6 702	3 389	77	8.53	16.45	8.32	11.5
1977.....	3 166	6 735	3 269	99	7.71	16.40	7.96	14.7
1978.....	3 148	6 788	3 311	97	7.65	16.41	8.00	14.3
1979.....	3 254	6 757	3 167	95	7.79	16.17	7.58	14.1

(a) Deaths under one year; included also in total deaths.

Vital Rates, Tasmania, 1865-1979 (a)



(a) Rates are per 1 000 of mean population. Only rates for every fifth year and 1979 are shown.

Crude Rate Comparisons

The rates per 1 000 of mean population for births, deaths and marriages are referred to as *crude* rates. It will be seen, in regard to marriages, that not *all* the population is 'at risk', children and those already married being obvious excluded examples. Similarly, births are clearly events related to certain fertile age groups of women and not to the total population; births also are related to the number of married persons and to the age structure of the married proportion of the community. Finally, deaths have a definite relationship with the

numbers of each sex and the age structure of the community. Therefore, crude rates are valid measures of comparison in the short term only.

Subject to this limitation, the following Tasmanian historical comparisons exist as from 1880:

- (i) Crude marriage rate: highest 10.51 (1946); lowest 5.50 (1859 and 1896).
- (ii) Crude birth rate: highest 36.63 (1884); lowest 16.17 (1979).
- (iii) Crude death rate: highest 17.41 (1883); lowest 7.58 (1979).

It is probably significant that 1946 was the year of rapid demobilisation after World War II and that a similar marriage trend was recorded for 1919 and 1920 after World War I. The crude birth rate for 1979 (16.17 per 1 000 of mean population) is the lowest recorded. The popularly accepted theory attributes the current low figure to deliberate family planning. This is supported by the fact that, although girls born in the post-war period have now entered the ranks of those likely to marry and have therefore increased the number of potentially fertile women, the fertility rate is declining (as described in a later section under 'Births').

### Review of Infant Mortality

Infant mortality relates to the number of deaths of children aged *under one year* and the rate is expressed as the number of such deaths per 1 000 live births. It follows that comparisons over long periods of time are valid and not affected by the limitations attached to crude rates. The peak year since 1880 was 1883 with a rate of 124.0. In the period 1880-1910, the annual infant mortality rate exceeded 100 on 14 occasions. There has been a steady improvement in infant mortality rates over the past 50 years. The rate for the period 1916-1920 was 64, for the year 1961, 16.8, and in 1976 a record minimum of 11.5 was achieved.

At the turn of the century, 20 to 25 per cent of all deaths were those of infants under one year. The rapid fall in infant mortality rates since then has had a marked effect on the crude death rate. Infant mortality has fallen largely due to advances in medical science enabling the control of disease and the development of techniques to reduce perinatal deaths; improvements in child care and nutrition also have made a significant contribution. (A perinatal death is defined as: (i) the death of a viable foetus (product of conception of at least 20 weeks gestation or of a weight not less than 400 grams) at any time up to the complete expulsion or extraction from its mother; and (ii) the death of a child born alive, where the death occurs at any time before the twenty-ninth day after the date of birth of the child. Details relating to perinatal deaths are included in the annual bulletins *Demography, Tasmania* (3101.6) and *Causes of Death, Tasmania* (3301.6).)

### Marriages

The following table analyses the ages of all bridegrooms and brides contracting marriages registered in 1979:

**Bridegrooms and Brides by Age, Tasmania, 1979**

Age last birthday (years)	Bridegrooms		Brides	
	Number	Per cent of total	Number	Per cent of total
Under 20 .....	193	5.93	874	26.86
20-24 .....	1 516	46.59	1 402	43.09
25-29 .....	707	21.73	422	12.97
30-34 .....	332	10.20	187	5.75
35-39 .....	152	4.67	112	3.44
40-44 .....	96	2.95	73	2.24
45-49 .....	73	2.24	51	1.57
50-54 .....	65	2.00	49	1.51
55-59 .....	41	1.26	29	0.89
60-64 .....	35	1.08	23	0.71
65 and over .....	44	1.35	32	0.98
Total .....	3 254	100.00	3 254	100.00

The following table gives the average age of brides and bridegrooms in recent years based on 'age last birthday' figures:

Average Age of Bridegrooms and Brides (Years), Tasmania

Particulars	1974	1975	1976	1977	1978	1979
Average age of bridegrooms—						
Bachelors .....	23.9	23.5	23.8	24.0	24.0	24.3
Widowers .....	58.9	57.0	55.3	56.2	56.7	57.2
Divorcees .....	38.5	37.3	37.7	37.7	37.6	37.3
All bridegrooms .....	26.0	23.7	27.0	27.3	27.4	27.7
Average age of brides—						
Spinsters .....	21.2	20.8	21.2	21.2	21.4	21.4
Widows .....	49.2	51.2	47.9	47.1	51.0	50.1
Divorcees .....	34.5	35.2	33.9	33.8	33.4	34.7
All brides .....	23.2	23.0	24.2	24.4	24.7	24.8

The following three tables show: (i) the number of persons under 21 years of age marrying; (ii) the conjugal condition of persons marrying; and (iii) marriages according to the type of marriage ceremony conducted, for a six-year period.

Marriages: Persons Under 21 Years of Age, Tasmania

Year	Age in Years						Persons under 21 years	
	15	16	17	18	19	20	Number	Percentage of all marriages

## Bridegrooms

1974 .....	—	—	7	144	220	393	764	21.42
1975 .....	—	—	6	105	213	348	672	20.73
1976 .....	—	—	4	111	191	347	653	18.78
1977 .....	—	—	1	77	156	286	520	16.42
1978 .....	—	—	3	66	151	285	505	16.04
1979 .....	—	—	3	62	128	267	460	14.14

## Brides

1974 .....	1	88	231	483	588	507	1 898	53.21
1975 .....	1	94	208	441	504	422	1 670	51.51
1976 .....	1	61	169	410	459	476	1 576	45.33
1977 .....	2	57	128	375	432	367	1 361	42.99
1978 .....	1	43	105	317	433	406	1 305	41.45
1979 .....	1	38	106	308	421	387	1 261	38.75

Conjugal Condition of Persons Marrying, Tasmania

Year	Bridegrooms			Brides			Total marriages
	Bachelors	Widowers	Divorcees	Spinsters	Widows	Divorcees	
1974 .....	3 184	86	297	3 169	133	265	3 567
1975 .....	2 844	90	308	2 863	108	271	3 242
1976 .....	2 798	98	581	2 805	132	540	3 477
1977 .....	2 521	89	556	2 498	122	546	3 166
1978 .....	2 508	107	533	2 467	125	556	3 148
1979 .....	2 555	109	590	2 567	128	559	3 254

## Marriages, Religious and Civil, Tasmania

Particulars of celebration	1974	1975	1976	1977	1978	1979
Religious rites—						
Church of England .....	1 350	1 147	1 067	989	959	945
Catholic .....	693	645	595	539	515	500
Presbyterian (a) .....	155	134	128	66	34	38
Methodist .....	440	407	442	212	—	—
Congregational .....	51	31	28	14	—	—
Baptist .....	89	103	94	91	77	87
Churches of Christ .....	22	21	34	24	22	19
Salvation Army .....	38	26	17	26	33	21
Seventh-day Adventist .....	5	10	5	5	12	10
Uniting Church (b) .....	—	—	—	—	428	371
Other .....	123	114	130	94	109	164
Civil ceremonies (c) .....	601	604	937	1 106	959	1 099
Total .....	3 567	3 242	3 477	3 166	3 148	3 254

(a) From 1978 figures relate to 'Continuing Presbyterians' only, following the amalgamation of the Presbyterian, Methodist and Congregational Churches.

(b) In 1978 Presbyterian, Methodist and Congregational Churches amalgamated to form the 'Uniting Church'.

(c) Marriages contracted before Registrars.

## Divorce

The *Matrimonial Causes Act 1860*, as amended, provided for divorce in Tasmania until 1 February 1961, when Australia came under a uniform divorce law, the *Matrimonial Causes Act 1959*, passed by the Federal Parliament. The *Family Law Act 1975* came into effect on 5 January 1976, replacing the *Matrimonial Causes Act 1959*. The main changes were the creation of the Family Court of Australia and the alteration of the grounds for divorce to the sole ground of irretrievable breakdown of marriage after 12 months separation. The commencement of the Family Court of Australia had a dramatic effect on the figures. In 1976 dissolutions of marriage represented 50.62 per cent of the number of marriages contracted for that year (1 760 dissolutions compared with 3 477 marriages).

The following table gives the number of petitions filed by husbands and wives respectively, and the number of dissolutions of marriage during the recent years. Every decree of dissolution of marriage is now, in the first instance, a decree *nisi* and is normally made absolute after a period of one month. Previously the period was three months.

## Petitions Filed and Dissolutions Granted, Tasmania

Particulars	1973	1974	1975	1976(a)	1977	1978
Petitions for dissolution (b) filed by—						
Husband .....	281	309	287	n. a.	n. a.	n. a.
Wife .....	354	444	444	n. a.	n. a.	n. a.
Total petitions .....	635	753	731	2 180	1 063	1 097
Dissolutions (b) granted on petition of—						
Husband .....	186	240	242	675	396	427
Wife .....	258	296	349	1 085	738	705
Total dissolutions .....	444	536	591	1 761	1 134	1 132

(a) The Family Law Court came into operation in 1976.

(b) Includes nullities of marriage.

The following three tables dissect dissolutions of marriage granted during 1978 by ages of parties at the time of marriage, by ages of parties at the time of dissolution and by the duration and issue of marriage:

**Dissolutions of Marriage (a): Ages of Parties at Time of Marriage, Tasmania, 1978**

Age of husband (years)	Age of wife (years)							Total husbands
	Under 20	20-29	30-39	40-49	50-59	60 and over	Not stated	
Under 20 .....	129	27	—	—	—	—	2	158
20-29 .....	375	438	17	2	1	—	3	836
30-39 .....	11	50	13	3	1	—	1	79
40-49 .....	1	12	11	8	4	2	—	38
50-59 .....	1	1	2	5	2	—	—	11
60 and over .....	—	—	—	2	3	1	—	6
Not stated .....	2	1	—	—	—	—	—	3
Total wives .....	519	529	43	20	11	3	6	1 131

(a) Excludes nullities of marriage.

**Dissolutions of Marriage (a): Ages of Parties at Time of Dissolution, Tasmania, 1978**

Age of husband (years)	Age of wife (years)							Total husbands
	Under 20	20-29	30-39	40-49	50-59	60 and over	Not stated	
Under 20 .....	—	—	—	—	—	—	—	—
20-29 .....	4	319	11	1	—	—	1	336
30-39 .....	—	141	229	8	1	1	1	381
40-49 .....	—	7	83	117	15	3	2	227
50-59 .....	—	2	9	55	53	8	2	129
60 and over .....	—	—	3	5	18	29	—	55
Not stated .....	—	1	—	1	1	—	—	3
Total wives .....	4	470	335	187	88	41	6	1 131

(a) Excludes nullities of marriage.

**Dissolutions of Marriage (a): Duration of Marriage and Issue, Tasmania, 1978**

Duration of marriage (years)	Dissolutions of marriages with—						Total marriages dissolved	Total number of children (b)
	No children	1 child	2 children	3 children	4 children	5 or more children		
0-4 .....	159	55	11	4	2	—	231	97
5-9 .....	95	76	105	32	7	1	316	415
10-14 .....	22	32	80	44	14	6	198	412
15-19 .....	7	9	46	37	25	13	137	380
20-24 .....	29	32	21	16	5	2	105	152
25-29 .....	46	17	9	1	3	—	76	50
30 and over .....	53	11	3	1	—	—	68	20
Total .....	411	232	275	135	56	22	1 131	1 526

(a) Excludes nullities of marriage.

(b) Under 21 years of age.

## Births

The following table shows the number of births classified according to the age of mother for recent years:

Number of Births Classified According to Age of Mother, Tasmania

Age group (years)	1974	1975	1976	1977	1978	1979	
						Number	Per cent
10-14 .....	7	7	8	11	6	2	—
15-19 .....	1 056	992	854	873	846	822	12.2
20-24 .....	2 699	2 605	2 545	2 395	2 417	2 363	35.0
25-29 .....	2 433	2 278	2 202	2 359	2 335	2 333	34.5
30-34 .....	852	777	801	869	914	996	14.7
35-39 .....	278	261	223	184	233	191	2.8
40-44 .....	69	59	65	40	31	47	0.7
45 and over .....	4	3	4	4	6	3	0.1
Total births .....	7 398	6 982	6 702	6 735	6 788	6 757	100.0

One observation of interest is that births of males, in total, usually exceed those of females. The next table shows births by sex and indicates masculinity:

Births by Sex and Masculinity, Tasmania

Particulars	1974	1975	1976	1977	1978	1979
Births of—						
Males .....	3 760	3 605	3 464	3 463	3 438	3 418
Females .....	3 638	3 377	3 238	3 272	3 350	3 339
Total .....	7 398	6 982	6 702	6 735	6 788	6 757
Masculinity (a) .....	103.35	106.78	106.98	105.84	102.63	102.37

(a) Number of male births per 100 female births.

In the following table, births are analysed by sex and by the age of the mother and classified as nuptial or ex-nuptial.

Births by Sex, Age of Mother and Nuptial State, Tasmania, 1979

Age group (years)	Nuptial births		Ex-nuptial births		All births		
	Male	Female	Male	Female	Male	Female	Total
10-14 .....	—	—	2	—	2	—	2
15-19 .....	208	172	228	214	436	386	822
20-24 .....	1 048	1 034	134	147	1 182	1 181	2 363
25-29 .....	1 096	1 115	59	63	1 155	1 178	2 333
30-34 .....	491	443	30	32	521	475	996
35-39 .....	86	86	12	7	98	93	191
40-44 .....	22	20	—	5	22	25	47
45 and over .....	2	—	—	1	2	1	3
Total .....	2 953	2 870	465	469	3 418	3 339	6 757

## Birth Rates

The *crude birth rate* is expressed as the number of births per 1 000 of mean population; this is obviously an unsatisfactory measure since births are events strictly related to the number of women in the fertile age groups. A more satisfactory index is the *fertility rate*, expressed as the number of births per 1 000 women aged 15-44 years. However, there are profound differences between the relative fertility of various age groups and a further refinement is the calculation of *age-specific birth rates*. The following table shows age-specific birth rates for each five-year age group of females from 10-49 years, the fertility rate applicable to all women in the age group 15-44 years and the crude birth rate.



## Birth and Fertility Rates, Tasmania

Particulars	1974	1975	1976	1977	1978	1979
Age Specific Birth Rates (a)						
Age group (years)—						
10-14 .....	0.3	0.3	0.4	0.6	0.3	0.1
15-19 .....	54.6	50.0	44.0	43.8	41.9	40.5
20-24 .....	165.6	153.4	153.0	141.3	139.8	132.1
25-29 .....	163.1	147.1	136.5	147.4	144.9	143.6
30-34 .....	70.7	61.8	61.2	61.9	61.8	65.1
35-39 .....	26.3	23.9	19.5	15.7	19.7	15.5
40-44 .....	6.5	5.8	6.4	3.9	3.0	4.4
45-49 .....	0.3	0.3	0.4	0.4	0.6	0.3
Fertility Rate (b)						
Fertility rate .....	88	81	77	76	75	73
Crude Birth Rate (c)						
Crude birth rate .....	18.5	17.3	16.4	16.4	16.4	16.2

(a) Number of births per 1 000 women in age groups shown.

(b) Number of births per 1 000 women aged 15-44 years.

(c) Number of births per 1 000 of mean population.

## Total Fertility, and Gross and Net Reproduction Rates

Total fertility for a population is obtained either by summing single age-specific birth rates for a year and dividing by 1 000 or by summing five-year age-specific birth rates, multiplying by five and dividing by 1 000. The result represents the hypothetical number of children a woman would bear throughout her child bearing years if she experienced the age-specific birth rates for that particular year during her lifetime.

The gross reproduction rate is derived from total fertility and the ratio of female to total births. It indicates the number of female children who would be born on average to women, supposing the rates from which it was calculated were to apply throughout the reproductive period. It is an indication of the extent to which the population is reproducing itself except that it does not allow for females who failed to survive to the end of their childbearing period. The net reproduction rate allows for such mortality. It is obtained by multiplying the age-specific rates by the survivor proportions in the corresponding age group of the stationary or life table population. Mortality in childhood and young adulthood is now so low that there is little difference between current gross and net reproduction rates.

A net reproduction rate of one indicates that the reproduction pattern for the particular year is such as to replace the current generation of mothers by an equivalent number of daughters, if continued.

The next table gives total fertility rates and gross and net reproduction rates for Tasmania for recent years. If the net reproduction rate of a country falls below unity the population will ultimately decrease and die out (assuming there is no net immigration gain) unless fertility is raised and/or mortality lowered. The fact that the population may be currently increasing is irrelevant.

## Total Fertility, and Gross and Net Reproduction Rates, Tasmania

Year	Total fertility	Gross reproduction rate	Net reproduction rate <i>r</i>
1974 .....	2.452	1.208	1.177
1975 .....	2.235	1.084	1.059
1976 .....	2.107	1.017	0.994
1977 .....	2.075	1.008	0.986
1978 .....	2.060	1.017	0.996
1979 .....	2.008	0.993	0.973

### Infant Mortality

Infant mortality relates to children dying within one year of birth. The table that follows analyses such deaths in further detail and shows that the greatest mortality rate is associated with infants in their first day of life. To obtain a correct picture of relative risk, it should be noted that deaths in the 'one day and under one week' class are spread over six days; in the 'one week and under four weeks' class spread over 21 days; and in the final class, spread over 338 days.

**Infant Mortality: Number of Deaths and Mortality Rates at Specific Ages, Tasmania**

Year	Infant deaths		Mortality rate (a) at age specified			
	Number	Per 1 000 live births	Under 1 day	1 day and under 1 week	1 week and under 4 weeks	4 weeks and under 12 months
1974.....	123	16.6	5.3	3.9	0.9	6.5
1975.....	128	18.3	4.6	5.2	1.4	7.2
1976.....	77	11.5	2.5	3.1	0.7	5.1
1977.....	99	14.7	3.1	3.3	0.7	7.6
1978.....	97	14.3	4.7	3.1	0.6	5.9
1979.....	95	14.1	3.7	3.0	1.8	5.6

(a) Infant deaths per 1 000 live births.

### Causes of Infant Deaths

The following table has been compiled on the basis of the Ninth Revision (1975) of the International Classification of Diseases (World Health Organisation).

**Infant Mortality: Causes of Death Under One Year, Tasmania, 1979**

Clause	Age					Total
	Under one week	1 week to under 1 month	1 month to under 3 months	3 months to under 6 months	6 months to under 1 year	
001-139 Infectious and parasitic diseases .....	—	1	—	—	—	1
320-389 Diseases of the nervous system .....	—	—	—	—	—	—
390-459 Diseases of the circulatory system .....	—	—	—	—	1	1
460-519 Diseases of the respiratory system .....	—	—	2	—	—	2
520-579 Diseases of the digestive system .....	—	—	—	—	—	—
740-759 Congenital anomalies .....	8	3	3	3	1	18
Perinatal causes—						
760 Maternal diseases and conditions .....	—	—	—	—	—	—
761-763 Obstetric complications .....	—	—	—	—	—	—
764,765 Slow fetal growth and immaturity .....	6	—	—	—	—	6
767 Birth trauma .....	1	—	—	—	—	1
769 Respiratory distress syndrome .....	12	1	1	—	—	14
768,770 Hypoxia, birth asphyxia and other respiratory conditions .....	12	—	1	—	—	13
773 Haemolytic disease of foetus and newborn .....	1	—	—	—	—	1
Other perinatal causes .....	4	2	—	—	1	7
798.0 Sudden infant death syndrome (a) .....	1	5	7	12	5	30
All other diseases .....	—	—	—	—	—	—
E800- E999 Accidents, poisonings and violence .....	—	—	1	—	—	1
Total .....	45	12	15	15	8	95

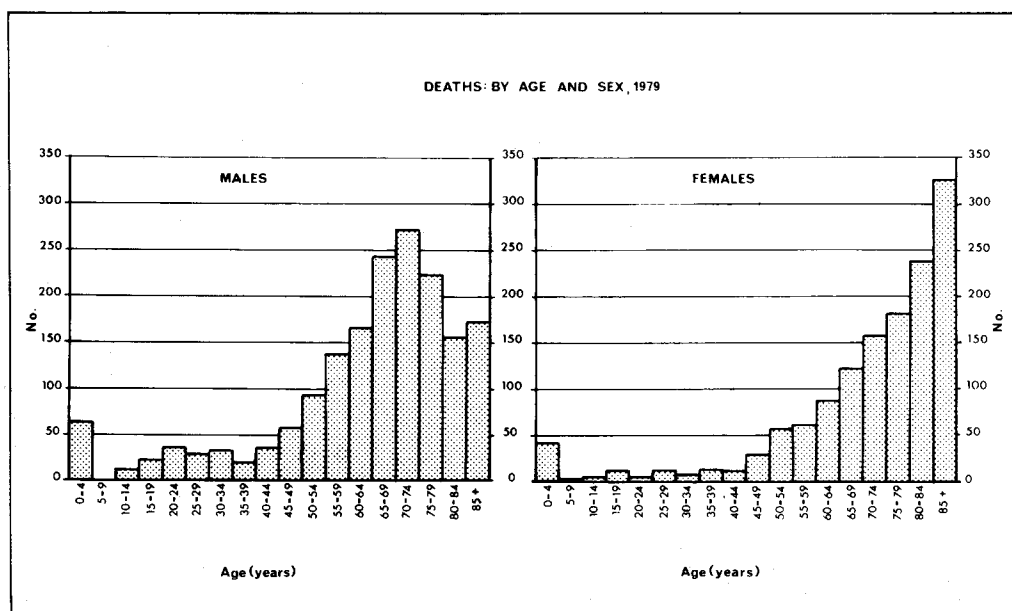
(a) 33 in 1974, 26 in 1975, 24 in 1976, 37 in 1977 and 28 in 1978.

## Deaths

A marked difference exists between male and female crude death rates as shown in the following table:

Male and Female Deaths and Crude Rates, Tasmania

Year	Number of deaths			Deaths per 1 000 of mean population			Ratio of male to female crude death rates
	Males	Females	Persons	Males	Females	Persons	
1974 .....	1 954	1 530	3 484	9.75	7.68	8.72	1.270
1975 .....	1 849	1 490	3 339	9.12	7.38	8.26	1.236
1976 .....	1 850	1 539	3 389	9.06	7.57	8.32	1.197
1977 .....	1 865	1 404	3 269	9.07	6.85	7.96	1.324
1978 .....	1 840	1 471	3 311	8.90	7.10	8.00	1.251
1979 .....	1 787	1 380	3 167	8.55	6.61	7.58	1.293



## Death Rates for Specific Age Groups

Previously in this chapter, crude death rates were described as unsuitable for comparisons over long periods of time due to changes in the age structure of the community. In the following table, this difficulty is overcome by calculating death rates for specific age groups. The method employed is to obtain the average annual deaths for specific age groups over those three-year periods which are broken into equal parts by a census of population (e.g. 30 June 1947 is the census date for a calculation of rates in the three years, 1946-1948 inclusive). Rates can then be calculated by comparing the average number of deaths for each group with the number of persons in each group as revealed by the census. In theory, the calculation of such rates need not be restricted to periods for which a census date forms the midpoint but the advantage of accepting such restriction lies in the accuracy of the age distribution obtained from the census. In the table that follows, three-year periods have been selected appropriate to the censuses of 1947, 1971 and 1976.

## Death Rates for Specific Age Groups (a), Tasmania

Age group (years)	Males			Females			Persons		
	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77	1946-48	1970-72	1975-77
0-4 .....	9.13	4.46	3.68	7.24	2.93	3.01	8.21	3.71	3.35
5-9 .....	1.15	0.47	0.49	0.69	0.36	0.27	0.92	0.42	0.39
10-14 .....	0.67	0.56	0.42	0.39	0.30	0.31	0.53	0.43	0.36
15-19 .....	1.62	2.42	2.18	1.46	0.60	0.57	1.54	1.53	1.39
20-24 .....	2.10	2.10	2.03	1.79	0.53	0.30	1.94	1.32	1.17
25-29 .....	2.12	1.87	1.13	1.74	0.83	0.66	1.93	1.37	0.90
30-34 .....	2.27	1.84	1.45	1.90	0.79	0.79	2.09	1.33	1.13
35-39 .....	3.10	2.10	1.94	2.59	1.34	1.25	2.85	1.73	1.60
40-44 .....	3.93	3.43	3.26	3.51	1.89	2.05	3.73	2.69	2.67
45-49 .....	5.88	5.36	6.00	4.66	3.10	3.57	5.28	4.25	4.83
50-54 .....	9.52	9.65	9.21	7.84	5.79	5.36	8.65	7.74	7.29
55-59 .....	16.98	15.77	14.68	10.03	8.26	9.26	13.44	12.06	11.97
60-64 .....	23.87	25.71	23.64	17.30	12.82	8.97	20.53	19.19	16.18
65-69 .....	41.82	41.10	38.01	27.35	22.40	18.68	34.56	31.51	28.10
70-74 .....	58.43	64.05	61.75	49.47	37.51	34.22	53.80	48.92	46.52
75-79 .....	103.22	94.96	94.52	77.00	62.46	54.53	89.78	74.91	70.52
80-84 .....	156.64	140.11	139.12	123.49	99.45	90.67	138.41	114.30	106.39
85 and over .....	292.36	220.56	231.82	220.32	204.67	190.16	250.16	210.54	202.98

(a) Rate per 1 000 of the population in the specified age group at census date.

## Causes of Death

The next table shows causes of death, the rates per 100 000 of mean population and the proportion of deaths by cause based on the Ninth (1975) Revision of the International Classification of Diseases (adopted for use in 1979).

## Causes of Death: Numbers and Rates, Tasmania, 1979

Cause of death	Inter- national classifi- cation	Number of deaths	Rate per 100 000 of mean popula- tion	Percentage of total deaths
Intestinal infectious disease .....	001-009	—	—	—
Tuberculosis .....	010-018	—	—	—
Whooping cough .....	033	—	—	—
Meningococcal infection .....	036	—	—	—
Tetanus .....	037	—	—	—
Septicaemia .....	038	5	1	0.2
Smallpox .....	050	—	—	—
Measles .....	055	—	—	—
Malaria .....	084	—	—	—
All other infectious and parasitic diseases .....	(a)	5	1	0.2
Infectious and parasitic diseases .....	001-139	10	2	0.3
Malignant neoplasm of stomach .....	151	35	8	1.1
Malignant neoplasm of colon .....	153	70	17	2.2
Malignant neoplasm of rectum, rectosigmoid junction and anus .....	154	23	6	0.7
Malignant neoplasm of trachea, bronchus and lung .....	162	122	29	3.9
Malignant neoplasm of female breast .....	174	47	11	1.5
Malignant neoplasm of cervix uteri .....	180	23	6	0.7
Leukaemia .....	204-208	27	6	0.9
All other malignant neoplasms .....	(b)	254	61	8.0
Malignant neoplasms .....	140-208	601	144	19.0

## Causes of Death: Numbers and Rates, Tasmania, 1979—continued

Cause of death	Inter-national classification	Number of deaths	Rate per 100 000 of mean population	Percentage of total deaths
Diabetes mellitus .....	250	31	7	1.0
Nutritional marasmus .....	261	—	—	—
Other protein-calorie malnutrition .....	262,263	—	—	—
Anaemias .....	280-285	7	2	0.2
Meningitis .....	320-322	1	—	—
Acute rheumatic fever .....	390-392	—	—	—
Chronic rheumatic heart disease .....	393-398	12	3	0.4
Hypertensive disease .....	401-405	40	10	1.3
Ischaemic heart disease .....	410-414	867	208	27.4
Cerebrovascular disease .....	430-438	339	81	10.7
Atherosclerosis .....	440	53	13	1.7
All other diseases of the circulatory system .....	(c)	268	64	8.5
Diseases of the circulatory system .....	390-459	1 579	378	49.9
Pneumonia .....	480-486	118	28	3.7
Influenza .....	487	3	1	0.1
Bronchitis, emphysema and asthma .....	490-493	55	13	1.7
Ulcer of stomach and duodenum .....	531-533	14	3	0.4
Appendicitis .....	540-543	—	—	—
Chronic liver disease and cirrhosis .....	571	28	7	0.9
Nephritis, nephrotic syndrome and nephrosis .....	580-589	25	6	0.8
Hyperplasia of prostate .....	600	3	1	0.1
Abortion .....	630-639	—	—	—
Direct obstetric deaths .....	{ 640-646	—	—	—
	{ 651-676	—	—	—
Congenital anomalies .....	740-759	28	7	0.9
Certain conditions originating in the perinatal period .....	760-779	42	10	1.3
Signs, symptoms and ill-defined conditions .....	780-799	37	9	1.2
All other conditions .....	Remainder of 210-799	319	76	10.1
Motor vehicle traffic accidents .....	E810-E819	94	22	3.0
Accidental falls .....	E880-E888	21	5	0.7
All other accidents and adverse effects .....	(d)	83	20	2.6
Accidents and adverse effects .....	E800-E949	198	47	6.3
Suicide .....	E950-E959	54	13	1.7
Homicide .....	E960-E969	10	2	0.3
All other external causes .....	(e)	4	1	0.1
Total, all causes .....	{ 001-799 } { E800-E999 }	3 167	758	100.0
Acute myocardial infarction (f) .....	410	647	155	20.4
Birth trauma (f) .....	767	1	—	—

(a) 020-032, 034, 035, 039-049, 051-054, 056-083, 085-139.

(b) 140-150, 152, 155-161, 163-173, 175-179, 181-203.

(c) 415-429, 441-459.

(d) E800-E807, E820-E879, E890-E949.

(e) E970-E999.

(f) Included in item groups and total, above.

## Causes of Death in Age Groups

The previous tables showing causes of death make no reference to age, a complete dissection by age and cause being beyond the scope of a *Year Book*. Nevertheless, there is an extremely significant relationship between age and cause of death and the next table indicates, in summary form, their close inter-connection. For each of the specified causes in the next table, two percentages are shown: (i) deaths in a particular age group as a proportion of total deaths from all causes in that age group; and (ii) deaths in a particular age group as a

proportion of total deaths from the same causes at all ages. The causes chosen and specified are such that they account, in total, for approximately 75 per cent or more of deaths in most of the given age groups.

Attention is called to 'Accidental and violent deaths' (800-999) which account for over 68 per cent of deaths in the age from 1 to 34 years inclusive. Also noteworthy is the present relative unimportance of 'Infective and parasitic diseases' (001-139). The most important group, in a total sense, is 'Diseases of the heart' (391-398, 401-405, 410-429) followed by 'Cancer (all forms)' (140-208); then 'Cerebrovascular diseases' (430-438); and 'Diseases of the respiratory system' (460-519). Nevertheless, the inter-connection between age and cause of death is so close that none of these causes needs to be specified for some age groups in the table.

Principal Causes of Death in Age Groups, Tasmania, 1979

Age group in years	Inter- national classifi- cation	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
Under 1 .....	798	Sudden death (cause unknown) .....	30	31.6	100.0
	768-770	Anoxic and hypoxic conditions .....	27	28.4	100.0
	740-759	Congenital anomalies .....	18	18.9	64.3
	765	Immaturity unqualified .....	6	6.3	100.0
	..	Other causes .....	14	14.7	-
		All causes .....	95	100.0	3.0
1-4 .....	800-999	Accidents and violence .....	5	41.7	1.9
	140-208	Cancer (all forms) (a) .....	1	8.3	0.2
	740-759	Congenital anomalies .....	2	16.7	7.1
	..	Other causes .....	4	33.3	-
		All causes .....	12	100.0	0.4
5-14 .....	800-999	Accidents and violence .....	17	60.7	6.4
	140-208	Cancer (all forms) (a) .....	5	17.9	0.8
	460-519	Diseases of respiratory system .....	-	-	-
	..	Other causes .....	6	21.4	-
		All causes .....	28	100.0	0.9
15-19 .....	800-999	Accidents and violence .....	28	80.0	10.5
	140-208	Cancer (all forms) (a) .....	1	2.9	0.2
	..	Other causes .....	6	17.1	-
		All causes .....	35	100.0	1.1
20-24 .....	800-999	Accidents and violence .....	30	73.2	11.3
	..	Other causes .....	11	26.8	-
		All causes .....	41	100.0	1.3
25-34 .....	800-999	Accidents and violence .....	55	67.9	20.7
	391-398	Diseases of heart .....	5	6.2	0.5
	401-405				
	410-429	Cancer (all forms) (a) .....	9	11.1	1.5
	140-208	Other causes .....	12	14.8	-
	..	All causes .....	81	100.0	2.6

## Principal Causes of Death in Age Groups, Tasmania, 1979—continued

Age group in years	Inter- national classifi- cation	Cause of death	Deaths from specified causes in age groups		
			Number	Proportion of deaths	
				In age group (per cent)	At all ages (per cent)
35-44 .....	800-999	Accidents and violence .....	26	32.1	9.8
	140-208	Cancer (all forms) (a) .....	21	25.9	3.5
	391-398	Diseases of heart .....	13	16.0	1.2
	401-405				
	410-429	Cerebrovascular diseases .....	2	2.5	0.6
	430-438	Diseases of respiratory system .....	2	2.5	0.6
	460-519	Other causes .....	17	21.0	—
	..	All causes .....	81	100.0	2.6
45-54 .....	391-398	Diseases of heart .....	78	32.6	7.0
	401-405				
	410-429	Cancer (all forms) (a) .....	70	29.3	11.6
	140-208	Accidents and violence .....	26	10.9	9.8
	800-999	Diseases of respiratory system .....	24	10.0	7.7
	460-519	Cerebrovascular diseases .....	15	6.3	4.4
	430-438	Other causes .....	26	10.9	—
	..	All causes .....	239	100.0	7.5
55-64 .....	391-398	Diseases of heart .....	186	41.0	16.7
	401-405				
	410-429	Cancer (all forms) (a) .....	113	24.9	18.8
	140-208	Cerebrovascular diseases .....	33	7.3	9.7
	430-438	Diseases of respiratory system .....	33	7.3	10.6
	460-519	Accidents and violence .....	33	7.3	12.4
	800-999	Diseases of arteries .....	7	1.5	6.4
	440-448	Other causes .....	49	10.8	—
	..	All causes .....	454	100.0	14.3
65-74 .....	391-398	Diseases of heart .....	317	39.8	28.4
	401-405				
	410-429	Cancer (all forms) (a) .....	207	26.0	34.4
	140-208	Cerebrovascular diseases .....	79	9.9	23.3
	430-438	Diseases of respiratory system .....	79	9.9	25.4
	460-519	Diseases of arteries .....	19	2.4	17.3
	440-448	Diabetes .....	12	1.5	38.7
	250	Other causes .....	84	10.5	—
	..	All causes .....	797	100.0	25.2
75 and over .....	391-398	Diseases of heart .....	515	39.5	46.2
	401-405				
	410-429	Cerebrovascular diseases .....	209	16.0	61.7
	430-438	Diseases of respiratory system .....	165	12.7	53.1
	460-519	Cancer (all forms) (a) .....	170	13.0	28.3
	140-208	Diseases of arteries .....	82	6.3	74.5
	440-448	Diabetes .....	12	0.9	38.7
	250	Other causes .....	151	11.6	—
	..	All causes .....	1 304	100.0	41.2

(a) Includes Hodgkin's disease and the leukaemias.

*Heart Diseases*

As the previous two tables indicate, heart diseases (list items 391-398, 401-405, 410-429) are the greatest single cause of death. The next table summarises deaths from heart diseases for recent years:

**Deaths from Heart Diseases (All Causes) (a), Tasmania**

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1974 .....	660	504	1 164	291	33.4
1975 .....	673	526	1 199	296	35.9
1976 .....	710	515	1 225	301	36.1
1977 .....	666	497	1 163	283	35.6
1978 .....	651	491	1 142	276	34.5
1979 .....	634	481	1 115	267	35.2

(a) List items 400-416, 420-443 in 1950; 390-398, 400-404, 410-429 from 1968; 391-398, 401-405, 410-429 from 1979.

*Malignant Neoplasms*

In the next table, deaths from 'Malignant neoplasms including Hodgkin's disease and the leukaemias' (cancer, all forms) are summarised:

**Deaths from all Types of Malignant Neoplasms (a), Tasmania**

Year	Number of deaths			Death rate per 100 000 of mean population	Deaths as a percentage of deaths from all causes
	Males	Females	Persons		
1974 .....	339	275	614	154	17.6
1975 .....	330	263	593	147	17.8
1976 .....	328	290	618	152	18.2
1977 .....	346	276	622	151	19.0
1978 .....	371	290	661	160	20.0
1979 .....	355	246	601	144	19.0

(a) List items 140-207 in 1950; 140-209 from 1968; 140-208 from 1979.

*Lung Cancer*

Considerable interest has been shown in lung cancer because of its suspected connection with smoking habits. The following table shows deaths attributed to 'Malignant neoplasm of respiratory system' for recent years:

**Deaths from Malignant Neoplasm of Respiratory System and Intrathoracic Organs (a), Tasmania**

Year	Males	Females	Persons	Year	Males	Females	Persons
1974 .....	104	12	116	1977 .....	104	19	123
1975 .....	103	20	123	1978 .....	110	26	136
1976 .....	112	15	127	1979 .....	109	22	131

(a) List items 160-165 to 1967; 160-163 from 1968; 160-165 from 1979.



### EXPECTATION OF LIFE AND LIFE TABLES

Previously, reference was made to the limitations of crude death rates as a measure of mortality. However, a correct measurement of the mortality of the population can be obtained from life tables.

A life table is, in effect, a mathematical model, its starting point being a hypothetical population (say 100 000) of newly-born males or females. Using data for a given period (e.g. single year age distribution of an actual population, deaths at single ages, etc.), the compiler calculates the theoretical number of survivors at each age in the hypothetical population until there are no survivors remaining.

#### Calculation of Life Expectancy

In the table that follows,  $l_x$  is the number of persons surviving at exact age  $x$ . From this survivors' table, other measures can then be computed, namely:

- $L_x$ : the average number living between any year  $x$  and  $x + 1$
- $e^\circ_x$ : the complete expectation of life (i.e. the average number of years lived after age  $x$  by each of a group of persons aged exactly  $x$ ).

Not only does the  $l_x$  column give numbers of survivors at each age but, if accumulated, it gives an approximate measure of the total number of years lived by the life table population. To obtain a more refined measure of the total number of years lived, it is necessary to accumulate  $L_x$  values. These can be obtained by averaging each consecutive pair of  $l_x$  values.

Taking the male life table for 1970-72 as an example and using rounded figures:

- Total of all  $l_x$  values (for  $x = 0, 1, \dots, 110$ ) = 6 831 000 years
- Total of all  $l_x$  values (for  $x = 1, 2, \dots, 111$ ) = 6 731 000 years
- Therefore, total  $L_x$  values (for  $x = 0, 1, \dots, 110$ ) = 6 781 000 years

According to the table, 100 000 males live a total of 6 781 000 years. It follows then, that the complete expectation of life ( $e^\circ_x$ ) can be taken as 67.81 years as from birth.

The above calculation shows the derivation of  $e^\circ_x$  where  $x$  is 0. The same logic applies to other ages (apart from the highest ages):

Again taking the male life table as an example:

- Total of  $l_x$  values ( $x = 10, 11, \dots, 110$ ) = 5 862 000 years
- Total of all  $l_x$  values ( $x = 11, 12, \dots, 111$ ) = 5 765 000 years
- Therefore, total  $L_x$  values ( $x = 10, 11, \dots, 110$ ) = 5 813 500 years

According to the table, 97 437 males live a total of a further 5 813 500 years. It follows then, that each male aged 10 has an average life expectancy of a further 59.66 years.

$$\left( \text{i.e. } \frac{5\,813\,500}{97\,437} \right)$$

From these examples, it will be seen that  $e^\circ_x$  is simply an average or per capita figure, the two elements involved being the total number of years lived by a given population, and the given population itself.

For the sake of brevity, the following usual values have not been given in the table:

- $d_x$  the number of deaths in the year of age  $x$  to  $x + 1$  among the  $l_x$  persons who enter on that year.
- $p_x$  the probability of a person aged  $x$  living a year.
- $q_x$  the probability of a person aged  $x$  dying within a year.

If required, these values can be computed from the tables as follows:

$$d_x = l_x - l_{x+1}$$

$$p_x = \frac{l_{x+1}}{l_x}$$

$$\text{and } q_x = 1 - p_x$$

The next table gives the number of survivors ( $l_x$  values) and complete expectation of life ( $e^\circ_x$  values) for Australian males:

**Australia: Life Tables, 1970-1972**  
**Survivors ( $l_x$ ) and Complete Expectation of Life ( $e_x^\circ$ )**  
**Males**

Age $x$	$l_x$	$e_x^\circ$	Age $x$	$l_x$	$e_x^\circ$	Age $x$	$l_x$	$e_x^\circ$
0.....	100 000	67.81	40.....	93 150	31.61	80.....	23 399	5.52
1.....	98 051	68.25	41.....	92 887	30.69	81.....	20 575	5.21
2.....	97 904	67.35	42.....	92 598	29.79	82.....	17 913	4.92
3.....	97 807	66.42	43.....	92 274	28.89	83.....	15 393	4.64
4.....	97 726	65.47	44.....	91 915	28.00	84.....	13 055	4.38
5.....	97 661	64.52	45.....	91 520	27.12	85.....	10 950	4.13
6.....	97 607	63.55	46.....	91 079	26.25	86.....	9 057	3.89
7.....	97 558	62.58	47.....	90 589	25.39	87.....	7 363	3.67
8.....	97 514	61.61	48.....	90 049	24.54	88.....	5 877	3.48
9.....	97 474	60.64	49.....	89 455	23.70	89.....	4 605	3.30
10.....	97 437	59.66	50.....	88 798	22.87	90.....	3 539	3.15
11.....	97 402	58.68	51.....	88 075	22.05	91.....	2 672	3.02
12.....	97 365	57.70	52.....	87 283	21.25	92.....	1 984	2.90
13.....	97 326	56.73	53.....	86 409	20.46	93.....	1 450	2.79
14.....	97 282	55.75	54.....	85 441	19.68	94.....	1 044	2.69
15.....	97 228	54.78	55.....	84 392	18.92	95.....	740	2.60
16.....	97 154	53.82	56.....	83 245	18.18	96.....	517	2.52
17.....	97 044	52.88	57.....	82 001	17.45	97.....	356	2.44
18.....	96 887	51.97	58.....	80 640	16.73	98.....	242	2.38
19.....	96 685	51.08	59.....	79 171	16.03	99.....	162	2.31
20.....	96 473	50.19	60.....	77 574	15.35	100.....	107	2.25
21.....	96 265	49.29	61.....	75 861	14.69	101.....	70	2.20
22.....	96 065	48.40	62.....	74 014	14.04	102.....	45	2.15
23.....	95 884	47.49	63.....	72 026	13.41	103.....	29	2.10
24.....	95 723	46.57	64.....	69 901	12.81	104.....	18	2.06
25.....	95 574	45.64	65.....	67 659	12.21	105.....	11	2.02
26.....	95 437	44.70	66.....	65 282	11.64	106.....	7	1.98
27.....	95 307	43.76	67.....	62 786	11.08	107.....	4	1.94
28.....	95 179	42.82	68.....	60 183	10.54	108.....	3	1.91
29.....	95 049	41.88	69.....	57 444	10.02	109.....	2	1.88
30.....	94 916	40.94	70.....	54 616	9.51	110.....	1	1.85
31.....	94 779	39.99	71.....	51 671	9.03			
32.....	94 639	39.05	72.....	48 626	8.56			
33.....	94 495	38.11	73.....	45 490	8.12			
34.....	94 346	37.17	74.....	42 285	7.69			
35.....	94 186	36.23	75.....	39 056	7.29			
36.....	94 010	35.30	76.....	35 801	6.90			
37.....	93 821	34.37	77.....	32 577	6.54			
38.....	93 618	33.44	78.....	29 414	6.19			
39.....	93 395	32.52	79.....	26 349	5.85			

The following table shows the  $l_x$  and  $e^\circ_x$  values for Australian females:

**Australia: Life Tables, 1970-1972**  
**Survivors ( $l_x$ ) and Complete Expectation of Life ( $e^\circ_x$ )**  
**Females**

Age $x$	$l_x$	$e^\circ_x$	Age $x$	$l_x$	$e^\circ_x$	Age $x$	$l_x$	$e^\circ_x$
0.....	100 000	74.49	40.....	95 848	37.16	80.....	44 242	6.68
1.....	98 499	74.74	41.....	95 671	36.22	81.....	40 588	6.45
2.....	98 369	73.83	42.....	95 477	35.30	82.....	36 855	6.06
3.....	98 294	72.89	43.....	95 263	34.37	83.....	33 106	5.69
4.....	98 240	71.93	44.....	95 026	33.46	84.....	29 358	5.35
5.....	98 193	70.97	45.....	94 771	32.55	85.....	25 746	5.03
6.....	98 153	69.99	46.....	94 488	31.64	86.....	22 270	4.74
7.....	98 116	69.02	47.....	94 176	30.75	87.....	19 024	4.46
8.....	98 084	68.04	48.....	93 835	29.86	88.....	16 030	4.20
9.....	98 056	67.06	49.....	93 462	28.97	89.....	13 315	3.96
10.....	98 030	66.08	50.....	93 057	28.10	90.....	10 888	3.73
11.....	98 007	65.10	51.....	92 615	27.23	91.....	8 753	3.52
12.....	97 984	64.11	52.....	92 138	26.37	92.....	6 921	3.33
13.....	97 960	63.13	53.....	91 625	25.51	93.....	5 378	3.14
14.....	97 931	62.14	54.....	91 073	24.66	94.....	4 103	2.97
15.....	97 897	61.17	55.....	90 484	23.82	95.....	3 070	2.81
16.....	97 857	60.19	56.....	89 843	22.99	96.....	2 250	2.65
17.....	97 802	59.22	57.....	89 150	22.16	97.....	1 615	2.51
18.....	97 734	58.27	58.....	88 401	21.35	98.....	1 133	2.37
19.....	97 664	57.31	59.....	87 595	20.54	99.....	776	2.25
20.....	97 596	56.35	60.....	86 719	19.74	100.....	519	2.13
21.....	97 532	55.38	61.....	85 774	18.95	101.....	338	2.02
22.....	97 472	54.42	62.....	84 753	18.17	102.....	214	1.91
23.....	97 414	53.45	63.....	83 652	17.41	103.....	132	1.82
24.....	97 356	52.48	64.....	82 462	16.65	104.....	79	1.72
25.....	97 296	51.51	65.....	81 187	15.90	105.....	46	1.64
26.....	97 236	50.54	66.....	79 813	15.17	106.....	26	1.56
27.....	97 175	49.58	67.....	78 310	14.45	107.....	14	1.48
28.....	97 112	48.61	68.....	76 688	13.75	108.....	7	1.41
29.....	97 046	47.64	69.....	74 909	13.06	109.....	4	1.35
30.....	96 975	46.67	70.....	72 983	12.39	110.....	2	1.28
31.....	96 899	45.71	71.....	70 885	11.74	111.....	1	1.23
32.....	96 819	44.75	72.....	68 607	11.12			
33.....	96 732	43.79	73.....	66 156	10.51			
34.....	96 637	42.83	74.....	63 510	9.93			
35.....	96 534	41.88	75.....	60 697	9.36			
36.....	96 422	40.92	76.....	57 700	8.82			
37.....	96 299	39.98	77.....	54 551	8.30			
38.....	96 162	39.03	78.....	51 258	7.80			
39.....	96 012	38.09	79.....	47 832	7.33			

The statistics in the above tables have been extracted from tables produced by the Commonwealth Actuary, the source data being supplied by the Australian Statistician and comprising: (i) the number of males and females living at each age last birthday, as shown by the 1971 Census; and (ii) the number of male and female deaths at each age (last birthday) in the years 1970, 1971 and 1972.

### True Death Rates

From a life table, the total number of years lived by the original population of 100 000 can readily be calculated. In the case of the 1970-72 male life table, the total number of years lived was 6 781 000. It follows that the death rate of this population may be expressed as:

$$\frac{100\,000}{6\,781\,000} \times \frac{1\,000}{1} \text{ per 1 000 years lived;}$$

i.e. 14.747 deaths per 1 000 years lived.

Life table experience can be regarded as the experience of a cross section of the population in a *single year* and the above calculation derives what is known as a 'true death rate' (the true death rate for the 1970-72 male population was 14.75 deaths per 1 000 persons per annum). The true death rate is thus the reciprocal of the complete expectation of life of a person at birth multiplied by 1 000.

The true death rate for a given period is unaffected by the particular age distribution of that period, and is determined solely by the mortality experience of the period as manifested in the rate of survival from each year of age to the next. The table below sets out complete expectation of life at birth and true death rates for the periods covered by the Australian life tables:

**Australia: Complete Expectation of Life at Birth and True Death Rates**

Period	Complete expectation of life at birth (years)		True death rate (a)	
	Males	Females	Males	Females
1881-1890 .....	47.20	50.84	21.19	19.67
1891-1900 .....	51.06	54.76	19.58	18.26
1901-1910 .....	55.20	58.84	18.12	17.00
1920-1922 .....	59.15	63.31	16.91	15.80
1932-1934 .....	63.48	67.14	15.75	14.89
1946-1948 .....	66.07	70.63	15.14	14.16
1953-1955 .....	67.14	72.75	14.89	13.75
1960-1962 .....	67.92	74.18	14.72	13.48
1965-1967 .....	67.63	74.15	14.79	13.49
1970-1972 .....	67.81	74.49	14.75	13.42

(a) Number of deaths per 1 000 in stationary (or life table) population in one year.

### Further References

#### *ABS Publications Produced by the Tasmanian Office:*

- Demography, Tasmania (3101.6) (1978 issue released 30-9-79, 37 pp.)
- Population of Local Government Areas, Tasmania (3201.6) (annual, 30 June 1979 released 21-11-79, 2 pp.)
- Population and Vital Statistics, Tasmania (3202.6) (quarterly, June Qtr 1980 released 15-8-80, 2 pp.)
- Causes of Death Tasmania (3301.6) (annual, 1978 released 14-8-79, 23 pp.)

#### *ABS Publications Produced by the Canberra Office:*

- Making Sense of the Census (1976 Census of Population and Housing Australia) (2129.0) (released 14-7-78, 26 pp.)
- Characteristics of the Population: Local Government Areas (Preliminary, 1976 Census of Population and Housing), Tasmania (2206.0) (released 1-9-78, 92 pp.)
- Populations and Dwellings in Local Government Areas and Urban Centres (Preliminary 1976 Census of Population and Housing), Tasmania (2406.0) (released 15-11-77, 18 pp.)
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- Australian Demographic Statistics Quarterly (March Qtr 1980 released 29-9-80, 22 pp.)

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Perinatal Deaths (3304·0) (annual, 1978 released 25-3-80, 30 pp.)

Australian Life Tables (3305·0) (irregular, 1970-72 released 26-10-76, 16 pp.)

Marriages (3306·0) (annual, 1978 released 2-11-79, 12 pp.)

Divorces (3307·0) (annual, 1978 released 2-6-80, 12 pp.)

Social Indicators (4101·0) (biennial 1978 released May 1978, 175 pp.)

*Other Publications:*

*Obstetric and Neonatal Report, Tasmania* (produced annually by the State Committee of the Royal College of Obstetricians and Gynaecologists and the Department of Obstetrics and Gynaecology, University of Tasmania, 1978 issue released in September 1979).

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## **Chapter 7**

### **AGRICULTURE**

#### **THE AGRICULTURAL INDUSTRY**

##### **General**

The Tasmanian rural economy is marked by great diversity and, even allowing for the special regional adaptations made necessary by soil, climate, terrain and altitude, there are many agricultural establishments which individually exhibit an extremely varied range of activities.

Because of the importance of exports, agriculture in Tasmania has suffered generally as a result of adverse international currency movements and weak or protected overseas markets. Although livestock, wool and dairy products have been affected by these factors the pattern of farming in Tasmania has maintained the emphasis on rearing livestock for meat production with dairy products and wool also important. Apple growing, while still significant, has suffered from the inability of returns to cover costs and hop growing has encountered marketing problems. The growing of vegetables for processing is a significant activity and oil poppies have become an important crop in the last few years.

##### **Historical**

The 1976 and earlier editions of the *Year Book* include a summary of agricultural statistics available from as early as 1818.

#### **Agricultural Industry Statistics**

##### *Sources of Information*

The statistics are principally compiled from census returns of livestock and crop production collected from establishments undertaking agricultural activity in Tasmania at 31 March each year. In conjunction with the general census, supplementary collections from farms are conducted where the harvesting of certain crops has not been completed by 31 March (e.g. apples, potatoes).

Additional information is also obtained from various marketing and other authorities and from a number of entirely separate collections covering such data as slaughtering and meat and dairy production.

##### *Period Covered*

Data relating to area sown, production and number of establishments growing crops are generally for the season ended 31 March. In cases where harvesting has not been completed by 31 March (e.g. potatoes), total production is nevertheless collected and included in published figures. Livestock numbers are also reported as at 31 March.

The census is conducted at 31 March (rather than 30 June) as it is considered to be the most appropriate date for all states to draw a line between the activities of two successive seasons.

The following tables give an indication of the seasonality of agricultural production in Tasmania. It should be noted that variations from the periods specified occur owing to variety of seed, district, seasonal conditions and scheduling of shearing.

Times of Planting and Harvesting Principal Crops, Tasmania

Crop	Time of planting	Harvesting period	Crop	Time of planting	Harvesting period
Cereals—			Fruit—		
Barley .....	Sept. to Nov.	Feb. to Mar.	Apples .....	..	Feb. to May
Oats .....	Mar. to Oct.	Nov. to Mar.	Apricots .....	..	Jan. to Feb.
Wheat .....	May to Sept.	Jan. to Feb.	Peaches .....	..	Jan. to Feb.
Vegetables—			Pears .....	..	Feb. to April
Beans, French and runner .....	Sept. to Jan.	Feb. to Apr.	Plums .....	..	Jan. to Feb.
Peas, green .....	June. to Dec.	Nov. to Feb.	Raspberries .....	..	Dec. to Jan.
Potatoes—			Currants .....	..	Jan. to Feb.
Early .....	May to July	Oct. to Nov.	Gooseberries .....	..	Nov. to Dec.
Late .....	Aug. to Nov.	Feb. to June	Strawberries .....	..	Nov. to Jan.
Tomatoes .....	Oct. to Nov.	Feb. to April			
Other crops—					
Hops .....	..	Feb. to Mar.			
Field peas .....	July to Sept.	Jan. to April			

Main Shearing, Lambing and Slaughtering Periods, Tasmania

Activity	Period
Shearing (a) .....	September to December
Lambing—	
Spring .....	August to October
Autumn and winter .....	March to July
Slaughtering for export—	
Lambs (a) .....	November to March

(a) The period shown is that in which the seasonal activity is more pronounced.

### Agricultural Establishment—Definition

Prior to 1975-76 an 'agricultural holding' was defined as 'a piece of land, one hectare or more in extent, used for the production of crops or for the raising of livestock and the production of livestock products'. Holdings of less than one hectare, on which commercial agricultural pursuits were carried out (e.g. nurseries, poultry farms, etc.) were also generally included.

It was recognised that many small holdings included under this definition were not engaged in agriculture on a 'commercial' scale and that the contribution such 'sub-commercial' holdings made to item totals was, in most cases, negligible.

With the creation of a new register of agricultural businesses in 1974-75 the opportunity was taken to streamline the Agricultural Census by redefining the basic Census unit, an establishment undertaking agricultural activity, as: 'a business unit which undertakes agricultural activity at one at more locations and for which the estimated value of agricultural operations is \$1 500 or more'.

The estimated value of operations for 1978-79 was obtained for each establishment by applying unit values to the commodity data reported on the 1979 Agricultural Census returns. The unit values used were averages for the previous three years to reduce the effects of short-term fluctuations in prices. In the case of crops, both area and production were valued, and for livestock, both animals sold during the year and numbers on farms at 31 March were valued. This was done to reduce the effects of variations in average yields and to give due acknowledgement to any business that undertook agricultural operations but did not actually sell any agricultural commodities (due to factors such as crop failures or unfavourable market conditions).

The value of operations concept is merely a convenient way of objectively determining: (i) the relative scales of activity of establishments undertaking agricultural activity so as to exclude the sub-commercial ones; and (ii) the industry classification of establishments. It is *not* a method of calculating *actual* gross income of farms.

The total effect of the new definition was not felt in 1975-76 as a resistance factor had been introduced to prevent rural establishments which were 10 hectares or more in extent

being excluded from the tabulations. These establishments were excluded from the 1976-77 tabulations if their value of agricultural operations remained below \$1 500. The exclusion of these establishments accounted for a large percentage of the total decrease of approximately 2 000 (25 per cent) in the number of establishments in the 1976-77 tabulations from the previous year. A further revision for 1978-79, to recognise the activities of all beekeepers, involved the inclusion of beekeepers without rural land. These beekeepers were previously excluded from establishment counts, although their beekeeping activities were included.

An analysis undertaken to investigate the possible effect of the new definition, and the consequent exclusion of a large number of 'sub-commercial' establishments, on census totals suggests that, except for a few minor crops, the effect on data is minimal.

#### Area of Crops

Total area of land sown or planted to crops is shown irrespective of whether the whole area was subsequently harvested or whether a portion or the whole of a crop failed and was not harvested. Where two successive crops are grown on the same land during the one season the land is included twice in the area of crops.

#### Value of Production

The statistics in the following sections refer mainly to areas sown to crops and quantities produced. The value of the various crops is shown under 'Value of Production' in Chapter 8. Financial statistics relating to agricultural enterprises are included towards the end of this chapter.

### Classification of Agricultural Enterprises by Industry

Creation of the new register of agricultural businesses (enterprises) and the application of the Australian Standard Industrial Classification to the Agricultural Sector has enabled the production of a classification of agricultural enterprises by size and industry. (An *enterprise* is defined as that unit comprising all operations in Australia of a single, operating legal entity. See also 'Economic Censuses and Surveys' in Chapter 18 for an explanation of the concepts of 'enterprise' and 'establishment'.) The industry class of an agricultural enterprise is determined basically according to the predominant activity as measured after the application of unit values to commodity data.

The following table shows for 1978-79 all agricultural enterprises in Tasmania with an estimated value of operations of \$1 500 or more, classified according to industry class and estimated value of operations:

**Agricultural Enterprises (a) Classified According to Industry Class and Estimated Value of Operations, Tasmania, 1978-79**  
(Number)

Industry class	Estimated value of operations (\$'000)						Total
	2 to 9	10 to 19	20 to 39	40 to 59	60 to 99	100 and over	
Sheep-meat cattle .....	271	100	82	31	33	24	541
Sheep .....	453	232	235	98	87	105	1 210
Meat cattle .....	780	113	53	7	6	3	962
Milk cattle .....	295	486	520	123	42	14	1 480
Pigs .....	85	47	34	10	5	6	187
Orchard and other fruit .....	139	83	93	50	43	21	429
Vegetables—potatoes .....	58	50	107	35	25	12	287
Vegetables—other .....	53	40	58	47	36	31	265
Other .....	245	86	76	38	19	22	486
Total .....	2 379	1 237	1 258	439	296	238	5 847

(a) An agricultural enterprise may comprise more than one establishment which undertakes agricultural activity. Column headings have been rounded to the nearest thousand dollars.



### Size of Agricultural Establishments

In the following table, rural establishments have been classified to size groups. The table shows the number and area of rural establishments in these groups for each statistical division.

Classification of Rural Establishments by Size, Tasmania 1978-79

Statistical Division	Under 50 ha	50- 99 ha	100- 299 ha	300- 999 ha	1 000 ha & over	Total
<b>Number of establishments—</b>						
Hobart .....	132	44	72	29	4	281
Southern .....	327	229	374	249	219	1 398
Northern .....	359	366	745	408	191	2 069
Mersey-Lyell .....	717	733	741	175	28	2 394
Tasmania .....	1 535	1 372	1 932	861	442	6 142
<b>Area of establishments ('000 ha)—</b>						
Hobart .....	2	3	12	16	8	41
Southern .....	8	17	64	133	621	843
Northern .....	10	27	132	209	594	971
Mersey-Lyell .....	21	53	118	84	101	377
Tasmania .....	41	100	325	443	1 323	2 232

### Number of Establishments with Crops or Livestock

At 31 March 1979 there were 6 142 establishments which satisfied the definition of an agricultural establishment (see earlier this Chapter). The following table shows the number of establishments growing selected principal crops or carrying livestock; this gives some indication of farming activities on a broad basis only, since the same establishment may be included more than once in the figures (in an extreme case, one establishment could be included 11 times):

Number of Establishments Growing Principal Crops or Carrying Livestock, Tasmania

Particulars	1973-74	1974-75	1975-76(a)	1976-77(a)	1977-78	1978-79
Number of agricultural establishments (at 31 March) .....	9 375	9 052	8 214	6 154	6 141	(a) 6 142
<b>Establishments—</b>						
<b>Growing—</b>						
<b>Grain (b)—</b>						
Barley .....	441	387	386	358	385	398
Oats .....	312	174	117	197	151	280
Wheat .....	91	39	47	53	40	43
Hops .....	76	50	28	26	22	22
<b>Vegetables (c)—</b>						
Potatoes .....	624	805	664	684	636	599
Onions .....	65	101	66	43	48	52
<b>Fruit (c)—</b>						
Orchard tree .....	612	486	425	398	367	373
Small fruit .....	244	249	211	168	169	162
<b>Carrying—</b>						
Cattle .....	8 098	7 986	7 229	5 541	5 428	5 186
Sheep .....	3 784	3 844	3 579	3 062	3 127	3 207
Pigs .....	1 185	1 010	974	900	851	775

(a) Not comparable with previous years, see definition of 'Agricultural establishment' given earlier.

(b) Eight hectares and over up to 1973-74; 10 hectares and over from 1974-75.

(c) 0.5 hectares and over.

### Land Utilisation on Agricultural Establishments

Establishments undertaking agricultural activity at present occupy 32.7 per cent of Tasmania's area of 6 830 000 hectares; details of land utilisation follow:

#### Land Utilisation on Agricultural Establishments, Tasmania (Hectares)

Type of usage	1968-69	1976-77	1977-78	1978-79
Crops (excluding sown pastures harvested) (a) . . . . .	105 616	64 718	69 686	80 439
Sown pastures (b) . . . . .	785 359	903 526	909 862	904 261
Balance (used mainly for grazing) . . . . .	1 776 473	1 340 055	1 301 729	1 247 018
Total area of all establishments . . . . .	2 667 448	2 308 299	2 281 277	2 231 718

(a) Excludes area of sown pasture harvested; includes orchards and small fruits.

(b) Includes area harvested. Lucerne is classified to sown pastures.

#### Definition of 'Crops'

'Crops' as specified in the previous table refers only to cultivated fields and orcharding land. However, it is reasonable to regard as a crop the yield obtained from harvesting sown pastures. The next table shows the total area of crops, using this wider definition and taking account of double-cropping:

#### Total Area of Crops, Tasmania (Hectares)

Area	1968-69	1976-77	1977-78	1978-79
Area used for crops (a) . . . . .	105 616	64 718	69 686	80 439
Area double-cropped . . . . .	5 140	2 531	2 299	2 637
Sown pastures harvested (b) . . . . .	87 164	73 264	49 081	70 257
Total area of crops . . . . .	197 919	140 514	121 066	153 333

(a) As shown in previous table.

(b) Includes lucerne.

#### Definition of 'Sown Pasture'

Sown pasture is pasture which has been developed by the sowing of non-indigenous grasses or legumes. The next table shows the total area of sown pasture and distinguishes between areas *cut* for various purposes and areas simply grazed:

#### Sown Pasture, Tasmania: Classification of Total Area (Hectares)

Particulars	1968-69	1976-77	1977-78	1978-79
Pasture harvested—				
Hay . . . . .	78 647	69 730	46 480	65 835
Seed . . . . .	1 819	1 018	922	1 958
Green feed or silage . . . . .	6 698	2 516	1 679	2 464
Total pastures harvested . . . . .	87 164	73 264	49 081	70 257
Pastures not harvested . . . . .	698 195	830 262	860 781	834 004
Total sown pasture . . . . .	785 359	903 526	909 862	904 261

### CROPS

The summary table below shows the area devoted to principal crop types. The table shows that the area of pasture crops (harvested for hay, seed, green feed and silage) varies significantly from season to season.

**Area of Principal Crops, Tasmania: Summary**  
(Hectares)

Crop	1968-69	1976-77	1977-78	1978-79
Section 1 (a)—				
Cereals for grain .....	30 381	20 019	17 332	21 901
Legumes mainly for grain .....	2 371	r 798	r 1 074	1 307
Crops for hay (b) .....	6 565	2 271	2 121	2 200
Crops for green feed or silage (c) .....	49 164	19 901	26 622	30 075
Fruit—Orchard tree .....	8 089	3 265	3 071	3 109
Berry and small .....	584	457	449	442
Vegetables for sale for human consumption .....	12 052	12 583	12 224	13 010
Hops .....	645	587	567	578
Oil poppies .....	(d)	6 117	7 969	8 739
Other crops .....	906	r 1 252	r 555	1 717
Total section 1 (e) .....	110 757	67 250	71 985	83 076
Section 2—				
Pasture harvested for hay, seed, green feed or silage (f)—				
Pasture hay .....	78 647	69 730	46 480	65 835
Pasture seed .....	1 819	1 018	922	1 958
Pasture harvested for green feed or silage .....	6 698	2 516	1 679	2 464
Total section 2 .....	87 164	73 264	49 081	70 257
Total area of crops .....	197 919	140 514	121 066	153 333

(a) Section 1 excludes pastures harvested for hay, seed, green feed or silage; details for these are given in Section 2.

(b) Excludes pasture hay; see Section 2.

(c) Includes vegetables for stock feed but excludes pastures harvested for green feed or silage; see Section 2.

(d) Prior to 1970-71 oil poppies were included in 'Other crops'.

(e) Includes land double-cropped; in 1978-79 area involved was 2 637 hectares.

(f) Includes lucerne harvested.

Details of individual crops, their area, production and yield per hectare, are shown in the next table:

**Crops: Area, Production and Yield per Hectare, Tasmania 1978-79**

Crop	Area (hectares)	Production		
		Unit of quantity	Total	Yield per hectare
Cereals for grain—				
Barley .....	11 938	tonnes	26 971	2.3
Oats .....	8 564	"	11 826	1.4
Wheat .....	1 366	"	2 867	2.1
Legumes mainly for grain—				
Horse beans .....	127	tonnes	166	1.3
Lupins .....	187	"	149	0.8
Field peas—				
Blue .....	466	"	928	2.0
Grey and other .....	527	"	922	1.7
Hay—				
Pasture (incl. lucerne) .....	65 835	tonnes	295 464	4.5
Oaten .....	1 981	"	8 502	4.3
Other .....	219	"	881	4.0

Crops: Area, Production and Yield per Hectare, Tasmania 1978-79—continued

Crop	Area (hectares)	Production		
		Unit of quantity	Total	Yield per hectare
Orchard tree fruit—				
Bearing—				
Apples .....	2 693	tonnes	85 230	31.6
Apricots .....	61	"	270	4.5
Pears .....	110	"	2 643	24.0
Other .....	25	..	..	..
Non-bearing .....	219	..	..	..
Berry and small fruit—				
Bearing—				
Currants (black and red) .....	203	tonnes	787	3.9
Gooseberries .....	6	"	43	6.7
Loganberries .....	24	"	138	5.8
Raspberries .....	99	"	424	4.3
Strawberries .....	18	"	104	5.6
Non-bearing .....	91	..	..	..
Vegetables for human consumption—				
Beans, French and runner .....	1 405	tonnes	13 464	9.6
Peas, green (a)—				
For processing .....	6 476	"	30 171	4.7
Sold in pod .....	8	"	8	1.0
Potatoes .....	3 646	"	124 385	34.1
Turnips, swede and white .....	215	"	2 594	12.1
Other .....	1 260	..	..	..
Pasture seed (incl. lucerne) .....	1 958	kg	721 792	368.6
Other crops—				
Hops (b) .....	578	tonnes	1 457	2.5
Oil poppies .....	8 739	..	n.p.	n.p.

(a) Ex-shell weight.

(b) Production is expressed as dry weight.

### Principal Crops

Although data on area and production of crops are compiled, in general, to give totals for each municipality, information in subsequent parts of this chapter dealing with geographical distribution is presented only in statistical divisions. The Hobart and Southern Division totals have been combined since the Hobart division basically contains a population which is predominantly urban in character. A description of the Tasmanian statistical divisions and sub-divisions appears in Chapter 2.

### Summary of Principal Crops

The following tables, which summarise the area of selected principal crops and give details of production for recent years, illustrate: (i) the importance of potatoes, green peas, French and runner beans for processing, and (ii) the declining importance of orchards and small fruit, and of wheat for grain. Oil poppies have become an important crop in recent years but details are not included as the figures relating to production are not available for publication.

## Selected Principal Crops, Tasmania: Area and Production

Crop	1968-69	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Area (Hectares)							
Barley for grain	10 608	11 121	12 020	11 475	11 644	11 444	11 938
Oats for grain	12 721	9 173	6 069	3 924	6 387	4 616	8 564
Wheat for grain	7 039	2 521	1 535	1 644	1 980	1 257	1 366
Total hay	85 212	91 924	80 483	71 567	72 001	48 601	68 035
Field peas	2 269	1 038	1 439	447	415	719	993
Pasture seed	1 819	3 982	2 219	628	1 018	922	1 958
Hops (a)	645	703	662	513	587	567	578
Beans, French and runner	674	1 089	1 078	1 054	1 277	1 143	1 405
Peas, green—							
For processing	5 671	4 750	4 635	5 525	6 363	6 221	6 476
Sold in pod	39	11	16	13	11	7	8
Potatoes	4 638	3 127	4 143	3 354	3 705	3 592	3 646
Orchard (tree) bearing—							
Apples	5 863	4 148	3 335	2 947	2 741	2 601	2 693
Pears	476	278	194	145	114	103	110
Berry and small fruit, bearing—							
Currants (black and red)	239	216	228	208	207	209	203
Loganberries	51	39	31	37	23	24	24
Raspberries	196	179	169	139	115	102	99
Strawberries	27	15	13	11	15	21	18
Production (Tonnes)							
Barley for grain	20 051	23 790	27 266	18 389	24 571	19 403	26 971
Oats for grain	10 576	8 247	5 496	3 497	8 801	4 279	11 826
Wheat for grain	11 166	3 510	2 282	1 728	3 929	1 545	2 867
Total hay	502 159	461 459	384 257	327 239	344 549	172 348	304 847
Field peas	3 507	1 750	2 959	586	765	761	1 850
Pasture seed	742	1 130	558	141	246	172	722
Hops (b)	1 582	1 949	1 439	1 129	1 330	1 201	1 457
Beans, French and runner	6 246	8 840	7 982	10 077	10 996	8 296	13 464
Peas, green (c)—							
For processing	24 615	17 139	21 070	20 680	31 632	27 223	30 171
Sold in pod	61	18	11	8	8	7	8
Potatoes	73 278	62 866	95 610	95 614	112 269	107 240	124 385
Apples	135 986	107 060	90 230	68 712	71 781	63 444	85 230
Pears	9 205	6 180	3 160	2 853	1 434	1 913	2 643
Currants (black and red)	1 197	865	951	470	575	681	787
Loganberries	285	239	248	154	222	142	138
Raspberries	1 192	946	1 216	656	563	552	424
Strawberries	92	103	94	72	84	84	104

(a) Includes areas not in full bearing.

(b) Dry weight.

(c) Ex-shell weight.

## Cereals for Grain

Barley has become the most important cereal grain crop, the area having stabilised after a steady increase up to 1970-71. The area of oats for grain during 1978-79 increased by 86 per cent from 1977-78, while the area of wheat for grain was 9 per cent up on the 1977-78 figure which was the record low so far this century. The following table shows the Tamar Statistical Sub-division as the major grain growing district with 47 per cent of the total area.

Area of Cereals for Grain by Statistical Division, 1978-79  
(Hectares)

Cereals for grain	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Barley	2 538	5 977	963	6 940	2 460	—	2 460	11 938
Oats	2 329	3 814	2 116	5 930	305	—	305	8 564
Wheat	501	578	247	825	40	—	40	1 366
Other	15	15	1	16	2	—	2	33
Total	5 383	10 384	3 327	13 711	2 807	—	2 807	21 901

(a) Statistical sub-division.

*Legumes Mainly for Grain*

The following table illustrates the geographical distribution of legumes mainly grown for grain and shows the Tamar Statistical Sub-division to be the major producing area:

**Area of Legumes Mainly for Grain by Statistical Division, 1978-79  
(Hectares)**

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Horse beans .....	24	56	—	56	47	—	47	127
Lupins .....	136	31	7	38	13	—	13	187
Field peas—								
Blue .....	2	400	40	440	24	—	24	466
Grey, etc .....	110	238	64	302	115	—	115	527

(a) Statistical sub-division.

*Hay and Green Feed*

The following table shows the geographical distribution of hay and green feed crops:

**Area of all Hay and Crops for Green Feed or Silage by Statistical Division, 1978-79  
(Hectares)**

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Hay—								
Pasture .....	9 042	20 033	11 065	31 098	25 691	4	25 695	65 835
Oaten .....	491	880	195	1 075	415	—	415	1 981
Other .....	77	45	8	53	89	—	89	219
Total .....	9 610	20 958	11 268	32 226	26 195	4	26 199	68 035
Crops for green feed or silage (b) .....	11 140	7 610	5 858	13 468	5 437	30	5 467	30 075

(a) Statistical sub-division.

(b) Includes vegetables for stock feed and pasture harvested for green feed or silage.

The North Western Sub-division, with the largest area devoted to sown pastures, produces approximately 42 per cent of the State's hay. Its predominance in area under hay and green feed crops can be related to the fact that it carries 39 per cent of the State's cattle and is the principal dairying area.

The principal green feed crop is oats (approximately 45 per cent of the total green feed area); other green feed crops include soft turnips, rape, chou moellier, barley, millet, ryecorn and wheat.

*Orchard Tree Fruit and Berry and Small Fruit*

Orcharding is heavily concentrated in and around the Huon Valley (Southern Statistical Division); the other main area is in the Tamar Valley (Northern Division). Berry and small fruit growing is almost entirely confined to the Derwent and Huon Valleys.

**Area of Orchard Tree and Berry and Small Fruit by Statistical Division, 1978-79**  
(Hectares)

Type	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Orchard tree fruit .....	2 345	506	14	520	244	—	244	3 109
Berry and small fruit .....	393	4	20	24	24	—	24	442

(a) Statistical sub-division.

In the period from 1948-49 State production of berry and small fruit has dropped by over three quarters. In spite of this Tasmania is still the principal producer of raspberries and black and red currants in Australia.

**Principal Small Fruits: Area and Production, Tasmania**

Year	Currants (black and red)		Loganberries		Raspberries		Strawberries	
	Bearing area	Pro-duction	Bearing area	Pro-duction	Bearing area	Pro-duction	Bearing area	Pro-duction
	hectares	tonnes	hectares	tonnes	hectares	tonnes	hectares	tonnes
1948-49 (a) .....	812	2 735	86	380	844	3 449	101	395
1973-74 .....	216	865	39	239	179	946	15	103
1974-75 .....	228	951	31	248	169	1 216	13	94
1975-76 .....	208	470	37	154	139	656	11	72
1976-77 .....	207	575	23	222	115	563	15	84
1977-78 .....	209	681	24	142	102	552	21	84
1978-79 .....	203	787	24	138	99	424	18	104

(a) Representative year from period when small fruit areas were at their highest level.

With the continued decline in apple production, the gross value of the apple crop for 1978-79 represented only 21 per cent of the total gross value of all crops (see the Appendix to Chapter 8). The next table gives recent details of area, production and average yield and illustrates the effect of economic problems confronting the industry.

**Apples: Area and Production, Tasmania**

Season	Area		Number of trees		Production		
	Bearing	Non-bearing	Bearing	Non-bearing	Total	Yield	
						Per bearing hectare	Per bearing tree
	hectares	hectares	'000	'000	tonnes	kg	kg
1973-74 .....	4 148	837	1 647	332	113 012	27 246	69
1974-75 .....	3 335	508	1 323	202	95 247	28 633	72
1975-76 .....	2 947	385	1 220	160	72 529	24 671	60
1976-77 .....	2 741	311	1 132	128	71 781	26 187	63
1977-78 .....	2 601	261	1 091	110	63 444	24 390	58
1978-79 .....	2 693	197	1 124	82	85 230	31 649	76

**Economic Problems:** In recent years, economic problems related to the importance of overseas markets and shipping costs have prompted the introduction of assistance to apple growers through schemes providing a stabilisation price for each variety of apple exported at risk to European markets. In the 1970-71 export season the Federal Government's *Apple and Pear Stabilisation Act* came into effect. Under this Act a support price is decided upon for each variety and, depending on the average market return for that variety, payments either into or from the fund are calculated. Pay-outs, which predominate, are made up to a maximum of eighty cents per bushel for any variety. Net amounts paid for apples under this scheme were: 1971-72, \$1 872 000; 1972-73, \$1 798 000; 1973-74, \$1 918 000; 1974-75,

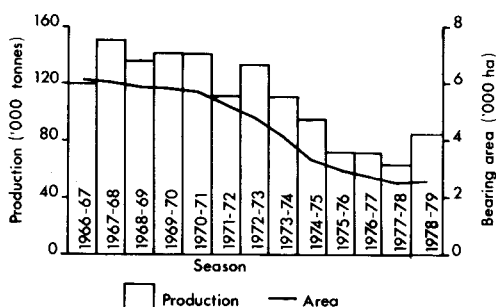
\$1 733 000; 1975-76, \$2 540 000; 1976-77, \$527 000; 1977-78, \$258 000; and 1978-79, \$1 962 000.

Since the 1973-74 season further subsidies have been provided under the *Apple Industry (Assistance) Act*. This Act, which effectively lifts the limit on payments under the stabilisation scheme, provides for equal contributions from the Federal and State Governments; however, in 1975-76 the Tasmanian Government paid an extra \$284 000. The total payments under this Act have been: 1973-74, \$3 180 000; 1974-75, \$1 144 000; 1975-76, \$742 000; 1976-77, \$78 000; 1977-78, \$178 000; and 1978-79, \$1 923 000.

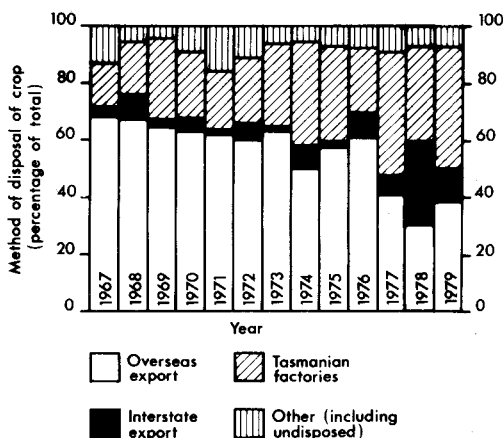
As shown earlier in this Chapter, the number of holdings with at least 0.5 hectares of orchard tree fruit (apples, pears, apricots, etc.) was only 373 at 31 March 1979 compared to 367 in 1978, 398 in 1977 and 425 in 1976; this decline is indicative of the serious problems facing the industry.

A wide variety of apples is produced in Tasmania but many only in small quantities. Of the total production of 85 230 tonnes in 1978-79, two varieties accounted for 40 per cent (granny smith, 22 per cent and democrat, 18 per cent) while jonathon, delicious (golden and other) and sturmer pippin accounted for a further 44 per cent between them.

Apples: Bearing Area and Production



Disposal of the Tasmanian Apple Crop



### Vegetables for Sale for Human Consumption

The concentration of vegetable growing in certain areas of the State is illustrated in the following table:

Vegetables for Sale for Human Consumption (a)  
Area Under Selected Crops by Statistical Division, 1978-79  
(Hectares)

Crop	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
Beans, French and runner	1	43	119	162	1 242	—	1 242	1 405
Peas, green	4	1 796	530	2 326	4 153	—	4 153	6 483
Potatoes	228	101	253	354	3 064	—	3 064	3 646
Turnips, swede and white	54	13	7	20	141	—	141	215
Other vegetables	197	160	60	220	843	—	843	1 261
Total	484	2 113	969	3 082	9 444	—	9 444	13 010

(a) Includes vegetables for processing.

(b) Statistical sub-division.



*Hops*

The almost universal use of the 'Pride of Ringwood' hop variety has led to a general increase in per hectare yields in recent years. As well, this variety has a higher percentage of usable resin than the older types and, at the same time, more efficient extraction methods have been devised. This has led to a changed disposal pattern with more emphasis on export, although export markets have not been particularly rewarding recently and stockpiling has occurred.

Other changes have also recently taken place in the industry. The majority of hops now produced are seedless (through the exclusion of male plants) in order to meet changing brewery demand and the market for hop extract. An increased quantity of hops is being pelletised before shipment. In this process the dried hops are hammer-milled, compressed into pellets and put into airtight containers that are either vacuum sealed or nitrogen flushed before sealing. This reduces resin losses due to oxidation, allows storage without refrigeration and decreases the bulk to be shipped.

Tasmania's total production of 1 457 tonnes in 1978-79 was 66 per cent of the total Australian hop production of 2 202 tonnes. The next table shows details of area, production and gross value over a six-year period:

**Hops, Tasmania: Area, Production and Gross Value**

Season	Number of growers	Total area	Production		
			Total (a)	Yield per hectare (a)	Value
		hectares	tonnes	kg	\$'000
1973-74 .....	76	703	1 949	2 772	3 213
1974-75 .....	50	662	1 439	2 174	1 238
1975-76 .....	28	513	1 129	2 200	1 575
1976-77 .....	26	587	1 330	2 266	2 254
1977-78 .....	22	565	1 201	2 126	2 351
1978-79 .....	22	578	1 457	2 521	3 209

(a) Dry weight.

*Oil Poppies*

Initially, oil poppies were grown on the mid North-West Coast, but more recently these have been grown in other parts of the State, although adverse weather conditions, particularly excessive rain, have proved to be a problem in some areas.

In 1978-79 the total area of oil poppies was 8 739 hectares compared with 7 969 hectares in the previous year and 6 117 hectares in 1976-77, the distribution being: Hobart and Southern statistical divisions, 1 096 hectares; Northern, 3 413 hectares; and Mersey-Lyell, 4 230 hectares. Production figures are not available for publication.

Oil poppy growing provides the raw material in the production of codeine and, within Australia, is at present restricted to Tasmania where two processing plants now operate.

*Pasture Seed*

The geographical distribution (in hectares) of areas yielding pasture seed in 1978-79 was as follows: Hobart and Southern, 219; Northern, 1 547; Mersey-Lyell, 192; total, 1 958. The area of pasture seed fluctuates widely depending on farming conditions; in 1973-74, 3 982 hectares yielded seed.

The main seed varieties produced on Tasmanian farms during the past six years are listed in the following table:

**Pasture Seed Production (a)**  
(kg)

Type of Grass	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Clover—White .....	22 197	22 480	6 460	6 643	765	10 606
Other .....	7 577	2 027	1 815	1 060	1 050	880
Ryegrass—Perennial .....	563 870	278 258	68 432	112 718	60 151	351 751
Hybrid .....	86 713	10 343	4 740	5 620	5 440	17 920
Italian .....	399 425	210 774	36 813	74 643	91 715	283 910
Cocksfoot .....	11 157	13 350	13 751	32 433	12 320	42 305
Other grasses .....	38 993	20 679	8 543	12 570	1 000	14 420
Total .....	1 129 932	557 911	140 554	245 687	172 441	721 792

(a) Includes all pasture seed harvested, whether as a separate crop or from an area sown to grain crops.

### *All Other Crops*

In the earlier table 'Area of Principal Crops' the item 'Other crops' (1 717 hectares in 1978-79) includes grape vines, lavender, flower seeds, cut flowers, lupins, mint and a variety of other crops grown for seed.

## LIVESTOCK

### Introduction

This subject is dealt with in two parts: (i) this section, which deals with numbers of livestock on establishments undertaking agricultural activity; and (ii) a later section, 'Livestock Products'.

The first part needs no comment but the second part (Livestock Products) requires explanation. In relation to the various types of livestock, the following products are included:

*Cattle*—meat, milk, butter, cheese.      *Sheep*—meat, wool.

*Pigs*—meat.      *Poultry*—meat, eggs.

Butter, meat and cheese, although regarded as manufacturing industry products, are included in the later section 'Livestock Products', because the pattern and scale of livestock farming is closely linked to the processing of these products.

### Number of Livestock on Agricultural Establishments

The following summary table shows the number of livestock on agricultural establishments for recent years:

**Livestock on Agricultural Establishments, Tasmania, at 31 March**  
(<sup>'000</sup>)

Year	Cattle	Sheep	Pigs	Horses
1974 .....	884.2	3 963.8	68.4	<i>n.a.</i>
1975 .....	920.8	4 136.2	64.0	<i>n.a.</i>
1976 (a) .....	909.2	4 248.9	69.8	<i>n.a.</i>
1977 (a) .....	818.8	4 014.6	64.6	<i>n.a.</i>
1978 .....	733.3	3 969.3	64.2	6.9
1979 .....	656.9	4 156.6	60.8	7.0
Tasmanian numbers as proportion of Australian total (1978-79) .....	% 2.4	% 3.1	% 2.7	% <i>n.a.</i>

(a) Not directly comparable with earlier years; see definition of 'Agricultural establishment' given earlier.

## Cattle

## Classification

The traditional way of classifying cattle has been to call them either 'dairy' or 'beef' cattle but this has led to confusion since the terms may refer to either *purpose* or *breed*. In the period 1942-43 to 1962-63, the annual farm census required this dissection but the terms were not defined. As from 1963-64 the cattle groupings have been organised to distinguish between: (i) bulls classified by *breed*; (ii) 'house cows' specified separately; and (iii) all other cattle classified according to *purpose* (i.e. milk production or meat production). The results of the 1977-78 and 1978-79 farm censuses are given in the following table. This closely follows the lay-out of the collection form.

Classification of Cattle on Agricultural Establishments at 31 March, Tasmania

Description	1978	1979
<b>Milk Cattle</b>		
<b>Dairy breed bulls used or intended for service—</b>		
Bulls 1 year and over .....	2 342	2 058
Bull calves under 1 year intended for service .....	897	837
<b>Dairy cows and heifers—</b>		
Cows, in milk and dry .....	117 829	110 470
Heifers, 1 year and over .....	27 897	25 245
Heifers calves, under 1 year .....	24 112	23 573
<b>House cows (in milk and dry) and heifers .....</b>	<b>2 259</b>	<b>1 465</b>
<b>Total milk cattle .....</b>	<b>175 336</b>	<b>163 648</b>
<b>Meat cattle</b>		
<b>Beef breed bulls used or intended for service</b>		
Bulls 1 year and over .....	10 146	9 126
Bull calves, under 1 year intended for service .....	3 683	3 771
<b>Other cattle and calves (not included above) mainly for meat production—</b>		
Cows and heifers, 1 year and over .....	256 938	231 312
Heifer calves, under 1 year .....	82 764	72 596
Other calves under 1 year .....	98 263	88 105
Other cattle, 1 year and over .....	106 133	88 374
<b>Total meat cattle .....</b>	<b>557 927</b>	<b>493 284</b>
<b>Total cattle and calves for all purposes .....</b>	<b>733 263</b>	<b>656 932</b>

The geographical distribution of holdings with cattle is shown below:

Distribution of Cattle in Statistical Divisions, 31 March 1979

Statistical division or sub-division	Number of establish- ments with cattle	Total dairy cattle (a)	Total beef cattle (b)	Total cattle
Hobart and Southern .....	1 258	11 872	105 751	117 623
Northern—				
Tamar .....	1 165	38 952	101 585	140 537
North Eastern .....	614	20 165	120 894	141 059
Total .....	1 779	59 117	222 479	281 596
Mersey-Lyell—				
North Western .....	2 142	92 626	164 015	256 641
Western .....	7	33	1 039	1 072
Total .....	2 149	92 659	165 054	257 713
Total Tasmania .....	5 186	163 648	493 284	656 932

(a) Includes dairy breed bulls and bull calves, cows and heifers used or intended for production of milk and cream for sale, and house cows.

(b) Includes beef breed bulls and bull calves, and other cattle and calves mainly for meat production.

The change in classification of cattle (outlined above) makes it impossible to compare, in full detail, the description of cattle in 1964-65 and subsequent years with descriptions reported in previous years but the following table is compiled to show broad groups regarded as generally comparable:

**Description of Cattle on Agricultural Establishments at 31 March, Tasmania**

Year	Number of establishments with cattle	Bulls (1 year and over)	Cows and heifers (1 year and over)	Calves (under 1 year)	Other	Total cattle
1950 .....	9 759	6 186	158 424	60 601	49 529	274 740
1955 .....	9 668	7 002	194 016	78 252	40 147	319 417
1960 .....	9 031	7 237	229 162	100 849	38 094	375 342
1965 .....	8 384	(a) 8 311	283 955	119 455	39 750	451 471
1970 .....	8 405	10 812	378 836	200 588	56 203	646 439
1975 .....	7 986	16 499	502 175	279 905	122 256	920 835
1979 (b) .....	5 186	11 184	368 492	188 882	88 374	656 932

(a) The specification of 'Bull calves (under 1 year)' from 1963-64 may affect the comparability of the series.

(b) Not directly comparable with earlier years; see definition of 'Agricultural establishment', given earlier.

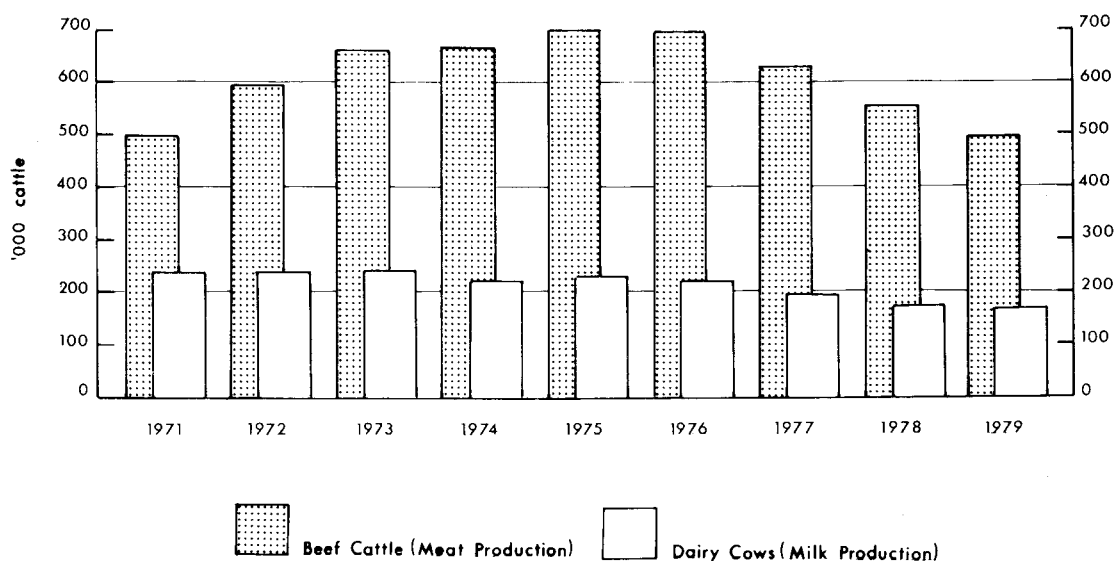
### Breeds of Cattle

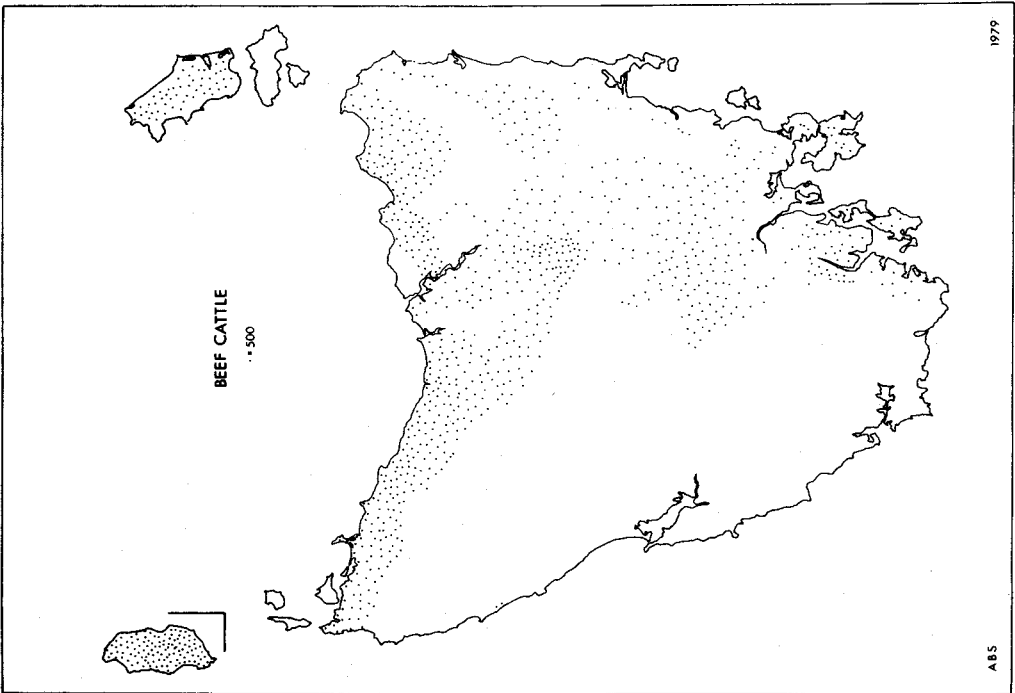
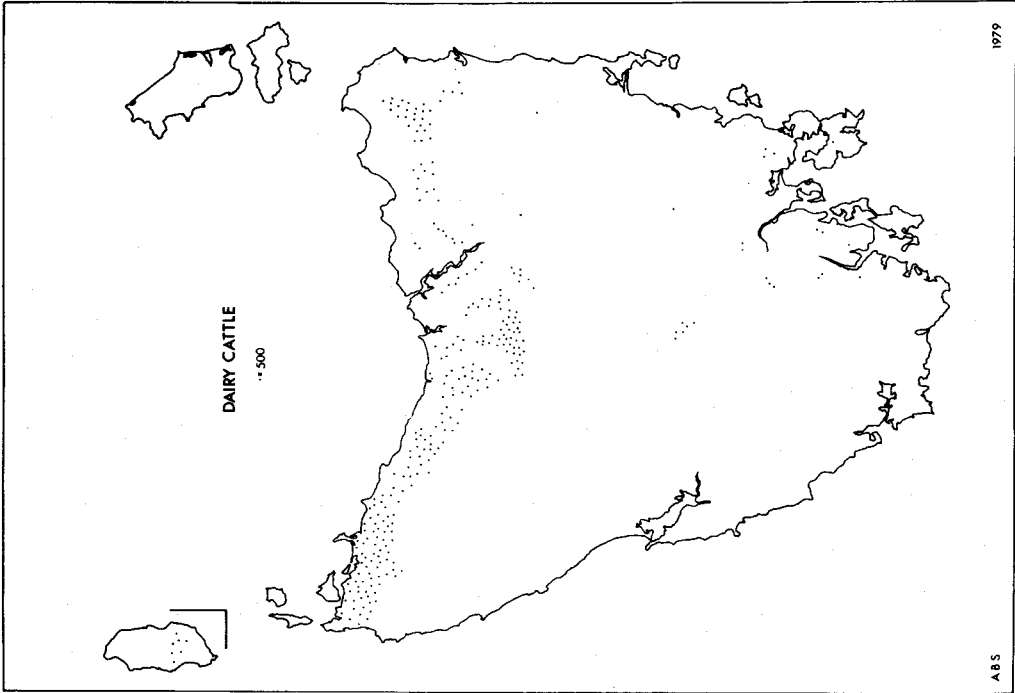
The main breeds of cattle in Tasmania for milk production are jersey, friesland and ayrshire with small numbers of milking shorthorn and guernsey, while breeds used for the production of beef are hereford, aberdeen angus, shorthorn and devon. In recent years, new cattle lines such as the brahmans, murray greys and charolais have been introduced by farmers wishing to utilise the advantages of cross-breeding.

The following graph gives an indication of the recent trends in numbers of cattle according to their association with the beef industry or the dairy industry. Details of the classification used are given in the notes to a table above.

**Numbers of Beef and Dairy Cattle, Tasmania**

(Cattle Mainly for Meat Production and Cattle Mainly for Milk Production)





## Sheep

The table below shows sheep numbers on agricultural establishments for recent years:

Sheep on Agricultural Establishments, at 31 March, Tasmania ('000)

Year	Sheep	Year	Sheep	Year	Sheep	Year	Sheep
1968 .....	4 428.2	1971 .....	4 517.2	1974 .....	3 963.8	1977 (a) .....	4 014.6
1969 .....	4 394.5	1972 .....	4 236.7	1975 .....	4 136.2	1978 .....	3 969.3
1970 .....	4 559.6	1973 .....	3 824.4	1976 (a) .....	4 248.9	1979 .....	4 156.6

(a) Not directly comparable with earlier years; see definition of 'Agricultural establishment' given earlier.

The next table shows the geographical distribution and various descriptions of sheep and also details of the lambing season:

Description of Sheep at 31 March 1979 and Lambing 1978 Season, by Statistical Division

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Establishments with sheep.....no.	1 011	940	434	1 374	820	2	822	3 207
Sheep ('000)—								
Rams (1 year and over)	19.0	14.3	12.2	26.5	3.8	—	3.8	49.2
Breeding ewes .....	786.7	528.6	461.7	990.3	155.5	—	155.6	1 932.6
Other ewes (1 year and over) .....	60.8	35.0	41.1	76.1	5.9	—	5.9	142.8
Wethers (1 year and over) .....	471.6	166.2	250.8	416.9	33.5	—	33.5	922.0
Lambs and hoggets (under 1 year) .....	474.3	269.1	279.3	548.4	87.3	—	87.4	1 110.0
Total .....	1 812.3	1 013.1	1 045.0	2 058.2	286.0	0.1	286.1	4 156.6
Lambing, 1978 season—								
Ewes mated .....	707.7	464.2	408.7	872.8	131.9	—	131.9	1 712.5
Lambs marked... ('000)	657.5	428.6	370.1	798.7	125.8	—	125.8	1 582.0
Marking ratio (b)... (%)	92.9	92.3	90.5	91.5	95.4	—	95.4	92.4

(a) Statistical sub-division.

(b) Lambs marked as percentage of ewes mated; lamb mortality is one of the factors affecting marking ratios.

The following table summarises the descriptions of sheep and gives details of lambing on a State basis:

Description of sheep at 31 March and Details of Lambing Summary, Tasmania

Particulars	1969	1974	1975	1976(a)	1977(a)	1978	1979
Establishments with sheep.....no.	5 098	3 784	3 844	3 579	3 062	3 127	3 207
Sheep ('000)—							
Rams (1 year and over) .....	50	47	50	50	48	49	49
Breeding ewes .....	2 023	1 788	1 846	1 835	1 793	1 780	1 933
Other ewes (1 year and over) .....	174	194	209	225	185	174	143
Wethers (1 year and over) .....	1 041	937	998	1 057	1 007	923	922
Lambs and hoggets (under 1 year) .....	1 105	998	1 034	1 082	982	1 044	1 110
Total .....	4 395	3 964	4 136	4 249	4 015	3 969	4 157

Description of sheep at 31 March and Details of Lambing Summary, Tasmania—*continued*

Particulars	1969	1974	1975	1976(a)	1977(a)	1978	1979
Lambing (b)—							
Ewes mated .....	1 736	1 535	1 644	1 677	1 640	1 672	1 712
Lambs marked—							
Number .....	1 561	1 361	1 466	1 515	1 378	1 529	1 582
Marking ratio (c) .....	89.9	88.7	89.2	90.4	84.0	91.4	92.4

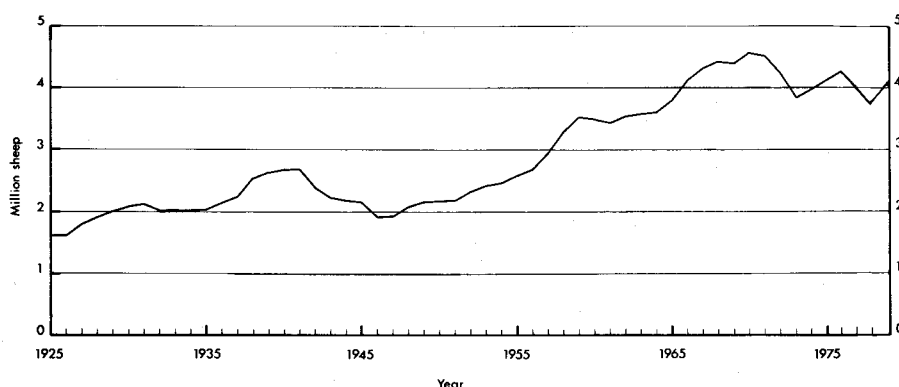
(a) Not directly comparable with earlier years; see definition of 'Agricultural establishment' given earlier.

(b) In the season preceding the year named.

(c) Lambs marked as percentage of ewes mated.

The following graph shows the trend in sheep numbers since 1925 and highlights the decline in the early 1970s:

Sheep Numbers, Tasmania



### Breeds of sheep

The merino is the mainstay of the Australian wool industry and accounts for over 75 per cent of the Australian sheep population. However, in Tasmania the predominant sheep breeds are polwarth and corriedale; both were originally developed from merino cross-breeds. A new sheep breed, the 'cormo', has been developed in Tasmania to suit local conditions and to provide a highly fertile breed having a high yield of fine wool and good body conformation.

Over the past 10 years, the breeds of sheep reported by growers have shown a trend in favour of polwarths. The following table shows the main breeds of sheep (including rams) as percentages of total sheep:

Proportion of Breeds of Sheep at 31 March, Tasmania (a)  
(Per Cent)

Breed	1967	1968	1969	1970	1971	1974	1977
Polwarth .....	39.9	40.5	41.7	42.5	43.6	44.0	42.6
Corriedale .....	19.5	18.0	17.3	15.4	14.4	13.1	12.4
Merino .....	8.0	7.1	7.7	7.9	8.9	10.7	10.5
Cormo .....	—	—	—	0.5	1.0	1.9	3.0
Romney marsh .....	2.2	2.0	1.9	1.2	1.3	0.7	1.1
Other breeds (b) .....	3.0	3.0	3.3	3.5	3.9	4.4	5.4
Comebacks .....	10.5	10.7	11.1	12.6	11.8	14.8	13.9
Cross-breeds .....	17.0	18.7	17.0	16.4	15.0	10.4	11.1
Total .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Similar data are not available for 1972, 1973, 1975, 1976, 1978 or 1979.

(b) Recognised breeds of sheep which individually, in 1977, accounted for about one per cent or less of all sheep; includes cheviot, dorset horn, border leicester, English leicester, ryeland, southdown, suffolk, lincoln, poll dorset, shropshire, hampshire down and perendale.

The majority of all breeds of sheep are run on improved pastures. However, particularly in the Midlands, use is made of considerable areas of unimproved 'run' country for polwarths, comebacks and merinos. The Central Plateau also provides summer grazing, particularly for wethers.

### Pigs

The geographical distribution of pigs, by statistical division, is shown in the next table:

**Distribution of Pigs by Statistical Division at 31 March 1979**

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (a)	North Eastern (a)	Total	North Western (a)	Western (a)	Total	
Establishments with pigs (no.)	169	235	83	318	285	3	288	775
Pig numbers—								
Boars .....	149	243	105	348	329	2	331	828
Breeding sows .....	1 329	2 265	1 126	3 391	3 870	17	3 887	8 607
Other (b) .....	6 489	13 693	7 057	20 750	24 089	36	24 125	51 364
Total pigs .....	7 967	16 201	8 288	24 489	28 288	55	28 343	60 799

(a) Statistical sub-division.

(b) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.

### Pig Population

The pig population at 31 March each year is not, in itself, a very meaningful figure. It is possible for a sow to produce two litters within the one year and for the offspring to number more than 10 in each litter. It follows, therefore, that the real measure of activity in pig-raising is not so much the size of the pig herd at a particular point in time, but rather the number of pigs slaughtered and the dressed carcass weight of the meat so produced; such information is given in the 'Livestock Products' section of this chapter.

In the previous table the most significant item is the number of breeding sows. A sow can be mated when only nine or ten months old and the gestation period is a mere four months. Piglets are weaned at four to six weeks—this early weaning calls for more skilled management but has advantages of avoiding heavy weight loss by the sow and reducing the period between litters.

The following table summarises pig numbers from 1955:

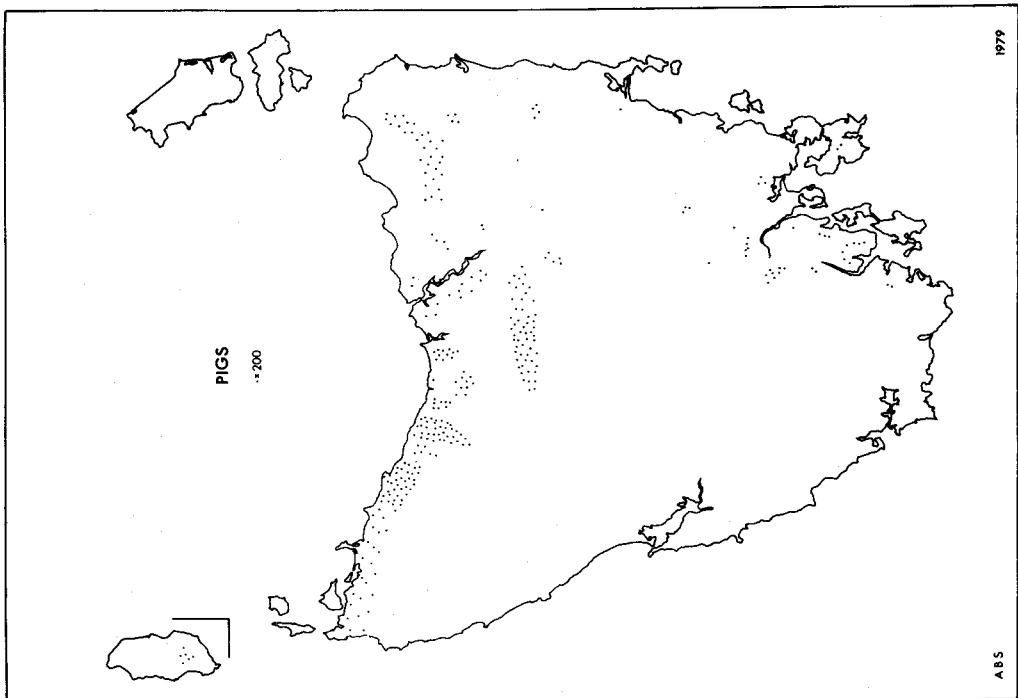
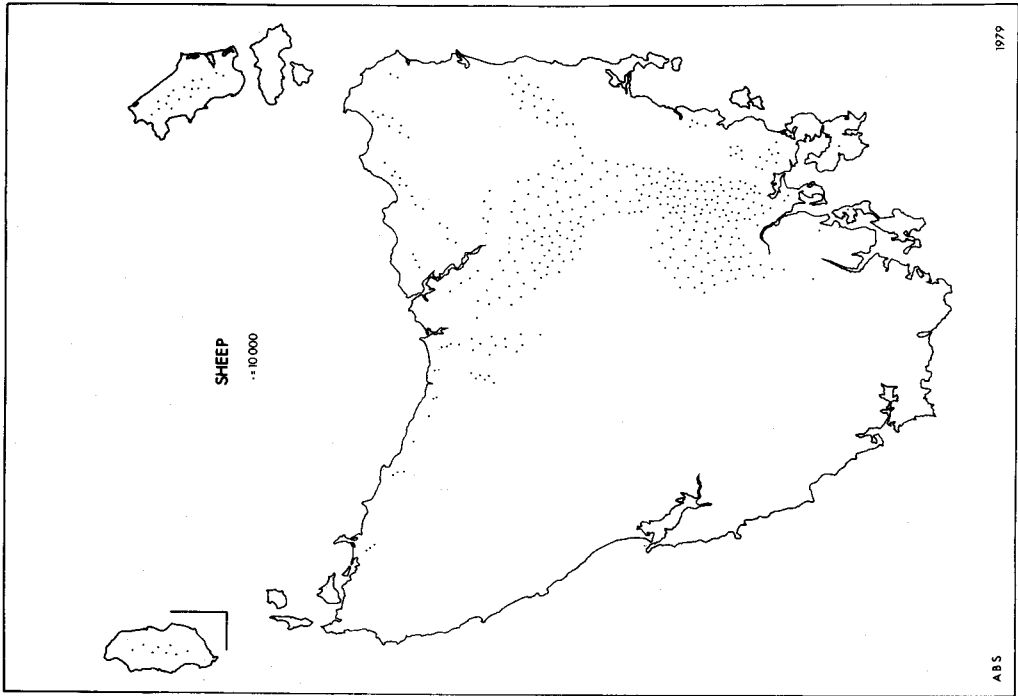
**Pigs on Agricultural Establishments at 31 March, Tasmania: Summary**

Year	Establishments with pigs	Boars	Breeding sows	Other (a)	Total pigs
1955.....	4 235	1 608	9 065	47 709	58 382
1960.....	3 681	2 075	10 730	54 313	67 118
1965.....	3 315	2 327	14 578	75 116	92 021
1970.....	2 302	1 978	16 629	92 668	111 275
1975.....	1 010	976	9 243	53 754	63 973
1979 (b).....	775	828	8 607	51 364	60 799

(a) Includes baconers and porkers, backfatters, stores, weaners, suckers and slips.

(b) Not directly comparable with earlier years; see definition of 'Agricultural establishment', given earlier.





**LIVESTOCK PRODUCTS**

The statistics in the following section refer, in the main, to quantities of livestock products. The associated values will be found under 'Value of Production' in Chapter 8.

**Wool****Wool Production**

For statistical purposes, the total amount of wool produced in the State in any year consists of not only the 'clip' (shorn wool) but also of the wool on skins, irrespective of whether it is actually removed by local fellmongers or exported on skins. Production figures for recent years are given in the next table:

**Wool Production (a) Summary**  
(<sup>'000</sup> kg)

Year	Shorn wool (including crutchings)	Fell- mongered wool, and wool exported on skins	Total	Year	Shorn wool (including crutchings)	Fell- mongered wool, and wool exported on skins	Total
1973-74 .....	16 021	1 528	17 549	1976-77 .....	16 174	1 935	18 109
1974-75 .....	17 147	1 741	18 888	1977-78 .....	16 950	1 974	18 924
1975-76 .....	17 962	1 989	19 951	1978-79 .....	17 442	1 636	19 079

(a) Fellmongered wool has been converted to greasy wool equivalent weight.

As illustrated in the previous table the shorn wool component has accounted for almost 90 per cent of total wool production over the last 6 years.

Total wool production of 21 861 000 kilograms in 1969-70 is the highest recorded wool output for Tasmania. However, uncertain economic conditions in the wool industry for subsequent years have resulted in a substantial decline in wool production.

**Export of Wool**

Export details for wool for recent years are given in the following table:

**Exports of Wool, Greasy (Overseas and Interstate)**  
(<sup>'000</sup> kg)

Year	Quantity	Year	Quantity	Year	Quantity
1969-70 .....	16 513	1972-73 .....	17 735	1975-76 .....	17 436
1970-71 .....	17 146	1973-74 .....	16 963	1976-77 .....	16 204
1971-72 .....	20 413	1974-75 .....	15 947	1977-78 .....	16 369

It should be noted that not all Tasmanian wool is exported, some being used, after scouring, etc., for manufacturing purposes within the State. Any locally processed wool exported is excluded from the above table.

**Shorn Wool**

The principal months for shearing in Tasmania are October, November and December, but during more recent years an increasing number of farmers have been shearing outside the traditional spring period. Such practices not only facilitate flock and property management but also provide more continuous employment for shearers and shed hands. The following table gives shearing details for recent years:

## Shearing and Shorn Wool Obtained

Year	Numbers shorn			Shorn wool obtained			Average yield		
	Sheep	Lambs	Total	From sheep (a)	From lambs	Total	From sheep (a)	From lambs	Total
	'000	'000	'000	'000 kg	'000 kg	'000 kg	kg	kg	kg
1973-74 .....	3 280	821	4 101	15 010	1 011	16 021	4.57	1.23	3.90
1974-75 .....	3 417	736	4 153	16 182	965	17 147	4.73	1.31	4.12
1975-76 .....	3 579	772	4 351	16 930	1 032	17 962	4.73	1.34	4.13
1976-77 .....	3 492	737	4 229	15 247	927	16 174	4.37	1.26	3.82
1977-78 .....	3 483	759	4 242	15 947	1 003	16 950	4.58	1.32	4.00
1978-79 .....	3 508	811	4 319	16 307	1 135	17 442	4.65	1.40	4.04

(a) Includes crutchings from sheep.

In 1978-79, 44 per cent of the shorn wool produced in Tasmania came from the Hobart and Southern Statistical Divisions combined; the Tamar and North-Eastern Sub-divisions contributed 23 and 28 per cent of the total, respectively.

The next table shows the geographical distribution of shorn wool production:

## Shearing and Shorn Wool Obtained (a) by Statistical Division, 1978-79

Particulars	Hobart and Southern	Northern			Mersey-Lyell			Total Tasmania
		Tamar (b)	North Eastern (b)	Total	North Western (b)	Western (b)	Total	
	NUMBER SHORN ('000)							
Sheep .....	1 592	825	904	1 729	188	—	188	3 508
Lambs .....	281	220	237	457	73	—	73	811
	SHORN WOOL OBTAINED (tonnes)							
From—Sheep .....	7 313	3 715	4 453	8 169	826	—	826	16 307
Lambs .....	347	316	353	668	120	—	120	1 135
Total .....	7 659	4 031	4 806	8 837	946	—	946	17 442
	AVERAGE YIELD (c) (kg)							
Sheep .....	4.59	4.51	4.93	4.73	4.39	—	4.39	4.65
Lambs .....	1.23	1.43	1.49	1.46	1.65	—	1.65	1.40

(a) Includes crutchings from sheep.

(b) Statistical sub-division.

(c) Per sheep or lamb shorn.

## Wool Auctions

The bulk of Tasmanian shorn wool is marketed in Hobart and Launceston at auctions organised by wool-selling brokers. Four auction sales are held each year—in October, December, February and June, with the February sale being the most important.

In addition to wool sold at auctions, some wool is bought direct from growers by dealers and by local manufacturers of woollen goods. A small proportion of the State's wool is marketed at Victorian auctions; growers on King Island and Flinders Island tend to use this outlet because of sea transport factors.

The following table shows the average price of shorn greasy wool sold at Tasmanian auctions in selected years since World War II and also the value of all wool produced. After a period of very low prices there was an upsurge in demand in 1972-73, particularly from Japanese buyers, and prices rose strongly. High prices continued until early 1974 when, with wool users turning to alternatives, buyers were being left with large stockpiles and prices started dropping. At this time the Australian Wool Corporation was established with the administration of the flexible reserve price scheme as part of its duties. A floor price of 300

cents per kilogram for 21 micron wool on a clean basis was originally set with the Wool Corporation carrying out 'support buying'. The market declined further, however, and the minimum price dropped to 250 cents for the 1974-75 and 1975-76 seasons. Prior to the devaluation of the Australian dollar in November 1976, the floor price was set at 275 cents for the 1976-77 season. After the devaluation the price was raised to 284 cents and remained at this level for 1977-78. In 1978-79 it was increased to 298 cents per kilogram.

**Tasmanian Average Auction Price and Total Value of Wool Produced**

Year	Average auction price per kg of shorn greasy wool	Total value of wool produced (a)	Year	Average auction price per kg of shorn greasy wool	Total value of wool produced (a)
	cents	\$'000		cents	\$'000
1949-50 .....	131	9 530	1974-75 .....	137	23 890
1959-60 .....	114	16 508	1975-76 .....	157	28 420
1964-65 .....	109	19 050	1976-77 .....	210	34 993
1969-70 .....	88	18 081	1977-78 .....	209	36 908
1973-74 .....	192	31 973	1978-79 .....	234	42 043

(a) Includes value of shorn wool, fellmongered and dead wool and estimated value of wool exported on skins.

The preceding price series refers only to shorn greasy wool sold at auction. In arriving at the value series for all wool produced, account is taken not only of wool sold at auction but also of direct growers' sales to dealers, manufacturers and fellmongers plus estimated value of wool exported on skins.

#### *Classification of Greasy Wool Sold at Auction*

The following information is compiled by the Wool Statistical Service of the Australian Wool Corporation on the basis of catalogues of auction sales. Wool sold at auction is classified according to quality which is expressed in terms of average fibre diameter. This is measured in millionths of a metre (microns).

**Mean Micron Analysis (a) of Greasy Wool Sold at Auction**  
(Source: Australian Wool Corporation)

Average fibre diameter (mean microns)	Greasy wool sold at auction—percentage of total			
	In Tasmania		In Australia	
	1977-78	1978-79	1977-78	1978-79
Finer than 18 .....	0.3	0.4	—	0.1
18 .....	1.6	1.9	1.1	1.3
19 .....	2.9	2.4	5.5	4.5
20 .....	1.6	1.9	11.9	11.4
21 .....	11.2	12.8	22.2	17.6
22 .....	14.3	15.8	20.3	21.4
23 .....	12.9	12.6	12.9	13.5
24 .....	12.4	12.1	6.1	8.5
25 .....	11.7	11.2	3.4	4.6
26 .....	6.0	5.7	3.0	3.2
27 .....	6.5	5.1	3.0	2.8
28 .....	3.8	3.6	2.7	2.5
29 .....	0.3	1.2	0.2	0.5
30 .....	7.6	5.9	3.8	3.6
32 .....	0.2	2.7	0.1	1.4
33 .....	2.4	0.4	1.3	0.1
34 .....	0.1	1.1	—	0.4
35 .....	1.0	—	0.3	—
36 .....	—	0.4	—	0.2
38 .....	0.8	0.3	0.3	0.2
Coarser than 38 .....	0.3	—	0.1	—
Oddments .....	2.1	2.7	1.8	2.1
Total .....	100.0	100.0	100.0	100.0

(a) A micron equals one millionth of a metre; the measurement relates to fibre diameter.

While the proportion of fine wool is comparatively low in the Tasmanian clip (since the State is historically and climatically a producer of cross-bred wool), growers offering fine wool sell a high proportion of superfine merino wool at premium prices.

### Clean Wool Yield

In 1978-79 the Tasmanian proportion of auctioned greasy wool classified as 'finer than 25 mean microns' was 60 per cent, whereas the corresponding Australian proportion was 78 per cent. There is usually a difference of this order, but the Tasmanian average price is nevertheless usually a few cents above the Australian auction average. Tasmanian averages, with Australian equivalents in brackets, have been (in cents): 1974-75, 137.46 (126.99); 1975-76, 156.57 (143.25); 1976-77, 210.00 (182.73); 1977-78, 208.62 (187.14); 1978-79, 234.36 (205.24). This apparent contradiction is explained by taking into account a second factor, not included in the foregoing quality analysis, namely the yield of clean wool that can be obtained from greasy wool. In respect of this factor, Tasmanian wools tend to yield higher than Australian; both natural and artificial environmental factors operate to the advantage of the Tasmanian clip. Evidence of this peculiarity of Tasmanian wool is provided in the next table which suggests that Tasmanian wool is freer from dust and vegetable matter than wool produced in other states.

Average Clean Yield of Wool Clip, Tasmania and Other Australian States  
(Source: Australian Wool Corporation)

State of sale (a)	Yield of clean wool from greasy (per cent)						
	1968-69	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
New South Wales .....	56.52	58.33	60.54	61.06	60.78	61.28	61.46
Victoria .....	59.58	60.24	61.55	62.02	61.14	62.01	65.67
Queensland .....	54.65	55.96	59.04	58.91	58.68	59.46	59.66
South Australia .....	55.14	56.77	58.76	57.90	56.70	56.88	57.87
Western Australia .....	56.39	54.26	57.69	58.42	57.50	56.91	57.68
Tasmania .....	<b>63.66</b>	<b>65.05</b>	<b>66.21</b>	<b>67.01</b>	<b>66.86</b>	<b>67.42</b>	<b>68.17</b>
Australia .....	57.10	58.08	59.93	60.18	59.21	59.93	63.39

(a) Wool from other Australian states is not sold at Tasmanian auctions so, for Tasmania, 'State of sale' and 'State or origin' are virtually the same except that some wool from Tasmania (mainly King and Flinders Islands) is sold at Victorian auctions.

### Meat

#### Slaughtering

The following table summarises slaughtering activity for recent years:

Stock Slaughtered (a) for Human Consumption, Tasmania: Summary  
(<sup>'000</sup>)

Year	Cattle and calves	Sheep and lambs	Pigs	Year	Cattle and calves	Sheep and lambs	Pigs
1973-74 .....	259	825	116	1976-77 .....	358	993	100
1974-75 .....	262	980	101	1977-78 .....	362	1 037	92
1975-76 .....	348	1 069	94	1978-79 .....	281	848	91

(a) In all registered slaughtering establishments and on farms.

To fully record the level of meat production for human consumption, statistics are obtained in respect of operations in abattoirs, other slaughtering establishments and factories, and slaughtering on farms.

The next table analyses the items 'Cattle and calves' and 'Sheep and lambs':

**Stock Slaughtered (a) for Human Consumption, Tasmania ('000)**

Year	Cattle and calves				Sheep and lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1973-74 .....	126	104	30	259	336	490	825	116
1974-75 .....	149	75	37	262	403	577	980	101
1975-76 .....	164	119	65	348	455	614	1 069	94
1976-77 .....	145	140	73	358	469	524	993	100
1977-78 .....	161	133	69	362	387	650	1 037	92
1978-79 (b) .....	124	103	54	281	345	503	848	91

(a) In all registered slaughtering establishments and on farms.

(b) In 1978-79 the on-farm components of total livestock slaughtered were: cattle and calves, 4 239; sheep and lambs, 56 755; and pigs, 1 045.

### Meat Production

Statistics of actual carcass weight rather than numbers of stock slaughtered provide a more precise measure of actual meat production and annual trends. The necessary weight data are collected from abattoirs, factories and licensed slaughterhouses (including 'country butchers'); in the case of livestock killed on farms, only the numbers are available and the resulting carcass weight has to be estimated. Statistics in terms of carcass weight covering the same field as the previous tables on slaughtering are shown in the following table:

**Production of Meat, Tasmania ('000 tonnes—Carcass Weight)**

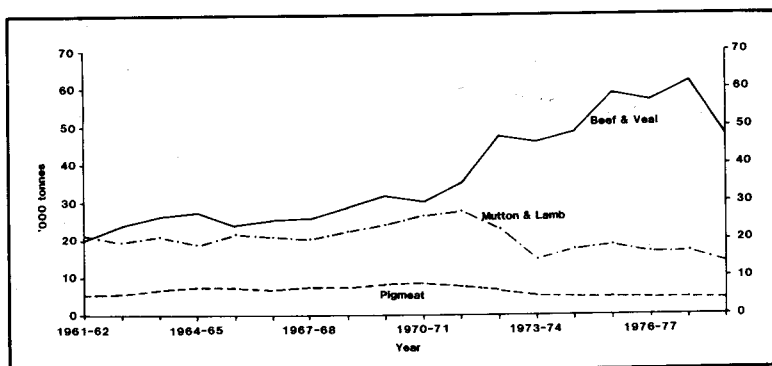
Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1973-74 .....	45.7	0.6	46.3	6.7	8.1	14.8	5.5	66.5
1974-75 .....	47.6	0.7	48.3	8.0	9.5	17.5	4.9	70.7
1975-76 .....	57.9	1.2	59.2	9.0	9.8	18.8	4.5	82.5
1976-77 .....	55.8	1.6	57.4	8.5	8.2	16.7	4.9	79.0
1977-78 .....	59.8	1.6	61.3	7.0	9.8	16.9	4.8	83.0
1978-79 .....	46.3	1.2	47.4	6.8	7.9	14.7	4.8	67.0

(a) Includes pork for manufacture into bacon and ham.

### Export of Meat

The next table shows exports of edible meat from cattle, sheep and pigs by weight. Export weight cannot be directly compared with production weight since the former includes boneless meat and meat which has had its fat content reduced, while the latter is in terms of carcass weight.

**Meat Production (Carcass Weight), Tasmania**



**Exports of Meat, Tasmania, 1978-79**  
(Tonnes)

Destination	Beef and veal	Lamb	Mutton	Pork	Offal (edible)	Bacon and ham
Interstate .....	907	559	142	210	6	11
Overseas .....	18 070	186	3 187	12	1 134	32
Total .....	18 977	745	3 329	222	1 140	43

The importance of Tasmania's overseas meat trade can be judged from Australian Meat Board estimates of the percentage of Tasmanian production actually exported. The trends in recent years are shown by the following table:

**Proportion of Tasmanian Meat Production Exported Overseas (a)**  
(Source: Australian Meat and Livestock Corporation)  
(Per Cent)

Type of meat	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Beef and veal .....	44.2	47.0	37.7	43.2	48.3	49.6	37.0
Mutton .....	53.7	40.5	55.0	67.8	74.1	69.4	44.1

(a) The estimated percentages are derived by converting actual export weights to a carcass weight equivalent, thus giving a basis for comparison with production figures.

### Meat Export Works

At 30 June 1980 there were eight establishments in Tasmania licensed to export meat. These were located at Launceston (two), Hobart, Longford, Smithton, Devonport, Somerset and King Island.

### Bacon and Ham

In the tables on meat production, the product from pig slaughtering has been referred to as 'pigmeat'. A large proportion of 'pigmeat' is converted into ham and bacon in Tasmania. Considerable quantities of pigmeat are also exported and used, in part, for making bacon and ham in other states. The next table summarises the production of bacon and ham since 1944-45:

**Production of Bacon and Ham, Tasmania**  
(Tonnes)

Year	Bacon and ham			Year	Bacon and ham		
	Factory (a)	Farm	Total (b)		Factory (a)	Farm	Total (b)
1944-45 .....	1 140	69	1 209	1973-74 .....	1 931	n.a.	1 931
1949-50 .....	963	44	1 007	1974-75 .....	2 169	n.a.	2 169
1954-55 .....	1 008	36	1 044	1975-76 .....	2 356	n.a.	2 356
1959-60 .....	1 138	24	1 162	1976-77 .....	2 434	n.a.	2 434
1964-65 .....	1 177	13	1 190	1977-78 .....	2 505	n.a.	2 505
1969-70 .....	1 403	n.a.	1 403	1978-79 .....	2 457	n.a.	2 457
1972-73 (c) .....	1 902	n.a.	1 902				

(a) From 1959-60 includes small quantities made in establishments not classified as factories.

(b) Excludes farm production from 1967-68.

(c) From 1970-71 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.

### Dairy Products

The following table summarises milk production and utilisation since 1964-65.

## Milk Production and Milk Utilisation (a), Tasmania: Summary

Year	Quantity of milk used for—			Total milk production	Dairy cows at 31 March	Average annual production of milk per dairy cow (c)
	Factory butter	Factory cheese	Other purposes (b)			
	'000 litres	'000 litres	'000 litres	'000 litres	no.	litres
1964-65 .....	293 773	23 935	79 361	397 069	143 257	2 678
1969-70 .....	336 715	54 194	78 306	469 216	155 040	2 955
1974-75 .....	248 075	123 781	88 665	460 521	143 719	3 165
1975-76 .....	218 793	133 206	83 087	435 086	143 310	2 965
1976-77 .....	197 244	131 333	94 094	422 671	128 297	3 053
1977-78 .....	159 903	138 612	82 183	380 697	117 829	3 037
1978-79 .....	(d) 129 347	174 063	87 367	(d) 390 777	110 470	3 368

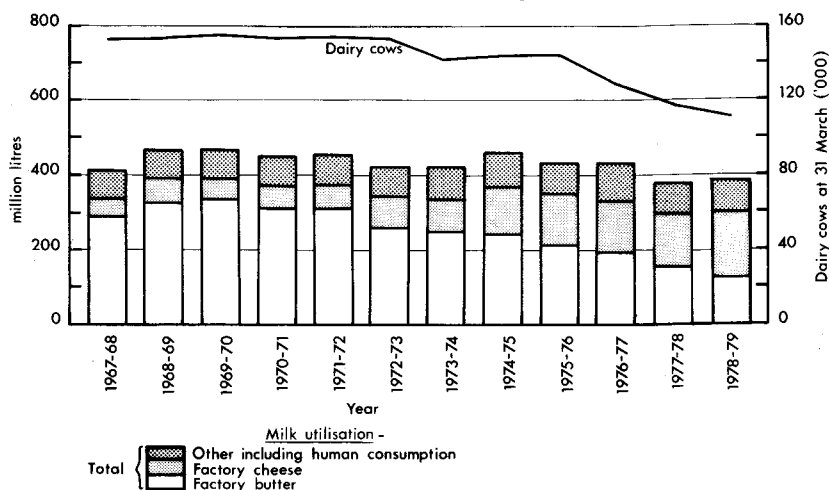
(a) Since a unit of wholemilk is not always dedicated in factory processing to one particular end product, it is not possible to record milk input to factories as being specifically for the production of butter or cheese, etc. Estimated wholemilk usage is calculated by applying conversion factors to the total quantity of each dairy product produced.

(b) Milk used for 'Other purposes' goes into the making of cream, ice cream, milk powder, concentrated milk, and other preserved milk products. It includes milk consumed as such and the milk equivalent of farm-made butter and cheese.

(c) The divisor for calculating average annual yield is the estimated number of dairy cows which were in milk at any part of the year. (The mean of the number of dairy cows, including house-cows, at 31 March of the current year and at 31 March of the previous year is taken for this purpose.) Averages are, therefore, lower than for cows which were yielding during the greater part of the year. The figures given should be treated as an index rather than an actual average quantity of milk produced per dairy cow.

(d) Due to a revision to the conversion factor applied to butter production (see note (a) above), data for 1978-79 is not comparable with earlier years.

## Milk Production and Number of Dairy Cows, Tasmania



The following table shows details of factory production of butter and cheese for recent years:

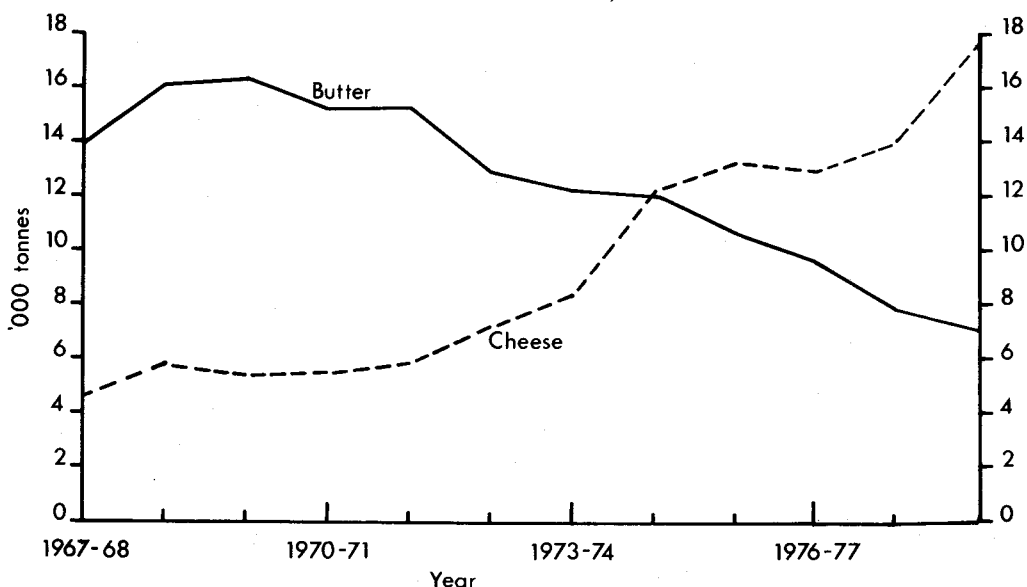
Factory Production of Butter and Cheese  
(Tonnes)

Year	Butter (a)	Cheese	Year	Butter (a)	Cheese
1973-74 .....	12 398	8 475	1976-77 .....	9 707	13 156
1974-75 .....	12 196	12 387	1977-78 .....	7 910	13 903
1975-76 .....	10 762	13 332	1978-79 .....	7 075	17 494

(a) Includes butter equivalent of butter oil.



## Butter and Cheese Production, Tasmania

*Consumption of Butter*

Over the past decade there has been a substantial decline in the annual Tasmanian per capita consumption of butter. The decline may be partly attributed to the greater use of margarine. However, in 1978-79 the State's average butter consumption of 6.3 kg per head of population was still well above the Australian figure of about 4.2 kg per person.

*Disposal of Butter*

Tasmania is a butter exporting state. The quantity of butter exported interstate and overseas varies from year to year depending on seasonal and market conditions.

Details of production, exports and consumption of butter within Tasmania for recent years are given in the following table:

**Butter (a): Production, Exports and Local Consumption, Tasmania (Tonnes)**

Year	Production (factory)	Net exports (b)	Local consumption (c)	Year	Production (factory)	Net exports (b)	Local consumption (c)
1973-74 .....	12 398	8 275	4 176	1976-77 .....	9 707	4 387	3 068
1974-75 .....	12 196	5 071	4 052	1977-78 .....	7 910	6 248	2 622
1975-76 .....	10 762	9 955	3 532	1978-79 .....	7 075	2 530	2 617

(a) Includes butter equivalent of butter oil.

(b) Net and gross are identical as there were no imports during the years shown. Includes overseas and interstate exports.

(c) Local consumption is assumed to equal the sum of local sales of factory butter and butter equivalent of butter oil, less butter content of major commodities exported. No allowance has been made in local consumption statistics for changes in wholesale or retail stocks.

**Bee-farming**

The next table, which summarises beekeeping statistics for recent years, is restricted to details from apiarists with 40 or more hives:

## Bee-farming, Tasmania

Year	Apiarists	Hives	Honey produced		Beeswax produced	
			Quantity	Average per productive hive	Quantity	Average per productive hive
	no.	no.	tonnes	kg	tonnes	kg
1973-74 .....	67	11 323	455	46.9	6.4	0.66
1974-75 .....	62	10 738	574	62.1	8.4	0.91
1975-76 .....	63	10 932	626	70.1	11.7	1.31
1976-77 .....	72	12 635	553	58.1	8.2	0.86
1977-78 .....	71	12 302	759	73.3	12.4	1.20
1978-79 .....	63	12 081	684	67.3	12.2	1.20

Of the 63 apiarists with 40 or more hives in 1978-79, 27 with 100 or more hives contributed 89.4 per cent of the total honey produced.

Tasmania is both an exporter and importer of honey with exports generally having a higher unit value than imports. The Tasmanian market shows a preference for the clover type of honey rather than the stronger flavoured leatherwood. Tasmania produces a high quality product but producers in mainland states have significant cost advantages in packaging because of the quantities involved. Therefore, considerable quantities of honey are imported from other states, both for manufacturing and for retail outlets, while much of Tasmania's production, particularly leatherwood but also clover, is exported.

A proportion of the larger commercial apiarists can be described as 'migratory' in the sense that they seasonally move their hives for access to leatherwood, growing in the Western Sub-division and near the new Lake Gordon. Leatherwood, *Eucryphia lucida*, from which a distinctively flavoured honey is produced, is unique to Tasmania. The quantity of leatherwood honey produced varies considerably from year to year depending upon the amount of blossom and weather conditions. Although leatherwood honey production in 1978-79, (1 403 tonnes), was 33 per cent below the record level of 1977-78, this still exceeded the previous record level by about 10 per cent. It accounted for 59 per cent of total honey production compared with 80 per cent the previous year and 37 per cent in 1976-77. The following table gives details of Tasmanian exports and imports of honey:

**Production, Imports and Exports of Honey, Tasmania**  
(<sup>000</sup> kg)

Year	Production (a)	Imports	Exports
1973-74 .....	455	123	218
1974-75 .....	574	120	244
1975-76 .....	626	133	370
1976-77 .....	553	122	367
1977-78 .....	759	56	269
1978-79 .....	684	n.y.a.	n.y.a.

(a) By apiarists with 40 or more hives.

## Poultry Farming

**Household Production:** Many householders have small flocks of up to 20 birds (i.e. below the legal minimum requiring registration and payment of fees) and surveys suggest that these 'back-yard' flocks may produce up to 50 per cent of all eggs. However, no accurate statistics are available for this component and it is excluded from the tables that follow.

**Commercial Producers:** Producers with small flocks over the legal minimum size (more than 20 birds) may nevertheless keep them mainly for their own use rather than for the sale of eggs. Accordingly, it was also decided to exclude from the statistics producers with less than 100 birds (of all types); the Bureau's 1966-67 census of the poultry industry established that producers with between 20 and 100 birds numbered 213 but owned only three per cent of the total number of hens and laying pullets in commercial flocks in Tasmania.

In 1969 there were 148 poultry farms with a total of 181 000 hens and laying pullets; by 1979 the number of farms had decreased to 68 with 188 700 hens and laying pullets and 598 100 other poultry. A size classification of the 68 farms in 1979 shows that 23 farms (only 34 per cent of farm numbers) possessed 86 per cent of laying stock. Thirty-seven per cent of the poultry farms had less than 500 laying birds each.

**Poultry Numbers and Egg Production, 1978-79, Tasmania  
Commercial Producers Only (a)**

Statistical division	Number of establishments with poultry	Poultry numbers at 30 June 1979			Eggs produced during year (b)
		Hens and laying pullets (c)	Other fowls	Ducks and drakes, turkeys and geese	
	no.	'000	'000	'000	'000 doz.
Hobart .....	12	54.4	32.2	-	1 049.4
Southern .....	19	30.3	502.0	n.p.	1 021.6
Northern .....	23	82.6	36.8	1.2	1 083.0
Mersey-Lyell .....	14	21.4	22.6	n.p.	447.1
Total Tasmania .....	68	188.7	593.5	4.6	3 601.1

(a) Relates to establishments that possessed 100 or more birds of all types at 30 June 1978.

(b) Hen and pullet eggs only.

(c) Not comparable with Egg Marketing Board series due to different definitions.

### Poultry Slaughtering

Poultry slaughtering statistics are collected from all known establishments slaughtering 100 or more birds (of all types) annually.

**Number and Weight of Poultry Slaughtered (a), Tasmania**

Year	Number  ( '000)	Live weight		Dressed weight (b)	
		Total (tonnes)	Average per bird (kg)	Total (tonnes)	Average per bird (kg)
CHICKENS (c)					
1976-77 .....	2 453	4 157	1.7	3 060	1.2
1977-78 .....	2 902	4 995	1.7	3 658	1.3
1978-79 .....	3 178	5 392	1.7	3 924	1.2
OTHER FOWLS (d)					
1976-77 .....	73	165	2.3	112	1.5
1977-78 .....	79	165	2.1	108	1.4
1978-79 .....	80	176	2.2	114	1.4
DUCKS AND DRAKES, TURKEYS AND GEESSE					
1976-77 .....	6	14	2.5	9	1.6
1977-78 .....	7	19	2.6	13	1.7
1978-79 .....	16	45	2.8	31	1.9

(a) Includes only establishments slaughtering 100 or more birds of all kinds.

(b) Includes weight of whole birds, pieces and giblets.

(c) Includes broilers, fryers and roasters.

(d) Hens, roosters, etc.

### Size Structure of Slaughtering Industry

The trend in poultry slaughtering in recent years has been towards larger establishments. In 1968-69 there were 67 establishments slaughtering 100 or more birds (of all types). Eight establishments killing more than 5 000 birds each a year slaughtered a total of 1 118 000 birds.

By 1978-79, however, there were only 19 establishments killing 100 or more birds, four of which slaughtered over 20 000 birds each and a total of 3 230 000 birds. The dressed carcass weight of birds produced in those establishments slaughtering over 20 000 birds was 4 005 000 kg; for all establishments in the following table, the total was 4 068 000 kg. In 1968-69 the over 20 000 birds size group accounted for 93.1 per cent of the number of birds slaughtered and in 1978-79, 98.7 per cent.

The following table classifies poultry slaughtering establishments according to the number of birds slaughtered for establishments slaughtering 100 or more birds of all types per year:

Number of Poultry Slaughtered According to Size of Establishment, Tasmania, 1978-79

Size of establishment (number of birds slaughtered) (a)	Number of establish- ments	Number of birds slaughtered			Total birds slaughtered	
		Chickens (b)	Other fowls (c)	Ducks and drakes, turkeys and geese	Number	Proportion of total
		'000	'000	'000	'000	per cent
100- 500 .....	5	-	1	-	1	-
501- 5 000 .....	7	4	5	4	13	0.4
5 001-20 000 .....	3	5	23	-	28	0.9
Over 20 000 .....	4	3 168	51	12	3 230	98.7
Total .....	19	3 177	80	16	3 273	100.0

(a) Classified according to number of birds of all kinds slaughtered.

(b) Includes broilers, fryers and roasters.

(c) Hens, roosters, etc.

## TECHNICAL ASPECTS OF AGRICULTURAL INDUSTRY

### Area of Land Irrigated

#### Introduction

In 1978-79 there were only 23 320 hectares of land irrigated in Tasmania. Owing to the generally reliable rainfall in the State, scarcity of water is not such a problem as it is in the other Australian states, although quite a number of streams are not permanently flowing and drought conditions in some areas of Tasmania are not unknown.

#### Area Irrigated

A total of 1 270 farms reported the use of irrigation in 1978-79, a decrease on the number during 1977-78 (1 481). Details of the area of crops and pastures irrigated in Tasmania in recent years are shown in the following table:

Area of Crops and Pasture Irrigated, Tasmania  
(Hectares)

Year	Crops (a)				Pasture	Total
	Fruit	Potatoes	Other vegetables	Other crops		
1973-74 .....	3 014	2 167	3 702	1 704	12 789	23 376
1974-75 .....	2 605	3 105	4 271	1 582	12 123	23 686
1975-76 .....	2 158	2 720	4 627	1 729	11 071	22 305
1976-77 .....	1 944	2 938	4 955	1 963	10 463	22 263
1977-78 .....	2 002	2 985	5 918	4 940	14 148	29 993
1978-79 .....	2 116	2 976	4 800	2 101	11 327	23 320

(a) Excludes pasture crops which are included with 'Pasture'.

*Irrigation Methods and Sources of Water*

The main method of irrigation is by 'spray' which accounted for 70.0 per cent of the total area irrigated in 1978-79. The following table gives details of the areas of crops, etc. irrigated and the methods of irrigation used:

**Methods of Irrigation, Tasmania, 1978-79**  
(Hectares)

Crop or pasture irrigated	Method				Total
	Spray	Furrows	Flood	Other and multiple methods (a)	
Crop—					
Fruit .....	1 641	22	73	380	2 116
Potatoes .....	2 872	—	2	94	2 968
Other vegetables .....	4 587	10	41	162	4 800
Other crops (b) .....	1 844	176	57	24	2 101
Pasture (incl. lucerne) .....	5 370	475	5 381	101	11 327
Total .....	16 314	683	5 554	761	23 312

(a) Includes 302 hectares of fruit watered by the 'trickle' method of irrigation.

(b) Excludes pastures harvested.

Potatoes respond particularly well to irrigation. For the 1978-79 season the State average potato yield from irrigated areas was 37.1 tonnes per hectare while for non-irrigated potato crops the yield was only 16.9 tonnes per hectare. The next table highlights the importance of irrigation in the potato growing industry:

**Potatoes Irrigated, Tasmania**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Total area of potatoes planted (hectares) .....	3 127	4 143	3 354	3 705	3 592	3 646
Area irrigated—						
Total (hectares) .....	2 166	3 105	2 720	2 938	2 985	3 101
As proportion of area planted (per cent) .....	69.3	74.9	81.1	79.3	83.1	85.1

**Irrigation Schemes***Cressy-Longford Irrigation Scheme*

The State's first major irrigation system was officially opened in 1974. Situated some 30 km south of Launceston, between Cressy and Longford, the Irrigation District covers about 10 000 ha of some of the oldest and most intensively farmed areas in the State.

The source of supply is the tailrace of the Poatina Power Station from which 12 000 megalitres may be diverted annually for irrigation. Water is supplied under gravity to each farm in the constituted Irrigation District through an earthen channel system some 94 km in length. The scheme is administered and operated by the Rivers and Water Supply Commission.

Some 5 500 ha can be watered by gravity from the channel system and are suitable for irrigation by flood, furrow or sprinkler methods. In addition, there are about 2 000 ha above the channel system which could be conveniently irrigated by pumping. A further 2 500 ha outside the boundary of the Irrigation District could be supplied either by pumping or gravity. There are 72 separate holdings within the constituted Irrigation District but at least another 30 holdings outside the District could be supplied from the scheme. Water from the scheme can also be discharged into the Liffey River below Bracknell and by this means at least another 20 riparian holdings within the Liffey River Augmented Flow District can be supplied. Properties within the Liffey River Flow Augmentation District which can be supplied with water have been allocated Irrigation Rights which amount in total to 442 megalitres.

Each piece of land within the Irrigation District is given an 'Irrigation Right' which is an annual entitlement to a certain quantity of water. The total water allocation as Irrigation Rights within the Irrigation District in 1980 was approximately 7 143 megalitres or 98 megalitres per holding. The average size of holdings was 137 hectares. Water charges within the Irrigation District for the 1979-80 season were: \$4.50 per megalitre for Irrigation Rights plus \$5.00 per megalitre for each megalitre of water used. The charge to irrigators outside the Irrigation District was \$12.00 per megalitre. The Hydro-Electric Commission charges the scheme \$1.30 per megalitre of water used by the irrigators.

Irrigation water used during the 1979-80 season amounted to 7 412 megalitres. The total area irrigated was 7 700 hectares, the main crops irrigated being: pasture, 5 700 ha; green peas, 1 045 ha; cereals, 120 ha; barley, 296 ha; oats, 258 ha; and lucerne, 165 ha. Under full development 3 000-4 000 hectares could be irrigated annually.

### *Togari Water Supply*

This scheme was originally administered by the Tasmanian Closer Settlement Board but authority to administer it was vested in the Rivers and Water Supply Commission in May 1974. It is designed purely as a stock and dairy watering system for 44 dairy properties at Togari in the Circular Head Municipality.

### **Tasmanian Herd Improvement Organisation**

In accordance with the *Herd Improvement Act, 1977*, the Artificial Breeding Board was replaced by the Tasmanian Herd Improvement Organisation in July 1977. This new Organisation took over the provision and promotion of herd improvement services, including both artificial breeding and herd recording.

In Tasmania most artificial breeding activities are undertaken by the Tasmanian Herd Improvement Organisation which operates a Semen Production Centre at Hadsphen Park and seven artificial insemination centres throughout the State. Some artificial insemination services are provided by private organisations. Approximately 75 per cent of inseminations in Tasmania are carried out with semen produced at Hadsphen Park.

Because artificial breeding allows extensive use of superior bulls it has been used as an effective tool for herd improvement. From 1964 until 1977 the Tasmanian Herd Improvement Organisation carried out dairy bull breeding programs in which genetically superior bulls were selected on the performance of their female progeny in test mated herds. These bulls have been used extensively as proven sires for large numbers of the State's dairy cows. It has been estimated that these programs have achieved a 1 per cent annual genetic gain in the State dairy herd.

Since July 1977, a young bull breeding program has been operating in Tasmania under the commercial name 'Gold Star Breeding Program'. This program involves the extensive use of semen from young bulls between 12-24 months of age and the subsequent selection of the top bulls utilized in these programs as 'Super Sires' for the breeding of future young bull teams. It is calculated that the new program has the potential to achieve annual genetic gain in the order of from two to three per cent.

Owing to different management practices, artificial breeding has not been used so extensively in beef herds.

The following table gives details of the number of inseminations carried out by the Tasmanian Herd Improvement Organisation and the total number of cows mated by artificial breeding in Tasmania for recent years:

**Artificial Breeding: Inseminations, Tasmania**

Year	Cows submitted for artificial insemination	
	Carried out by T.H.I.O.	Total cows served (a)
	no.	no.
1978-79 .....	30 114	36 216
1979-80 .....	31 725	40 264

(a) Includes cows inseminated by all licensed operators (commercial organisations and owner-operators).

## Artificial Fertilisers

*Types of Artificial Fertiliser*

The basic types of artificial fertiliser employed are phosphatic (e.g. superphosphate), nitrogenous (e.g. sulphate of ammonia) and potassic (e.g. muriate of potash), their essential chemical contribution to plant nutrition being phosphoric oxide ( $P_2O_5$ ), nitrogen (N) and potassium oxide ( $K_2O$ ). Superphosphate, either 'straight' or with additives, is most widely used in Tasmania, the additives consisting of trace elements such as cobalt, molybdenum, copper, boron, zinc, etc. In addition to the basic fertiliser types, many combinations are also used.

*Usage*

The quantity of artificial fertilisers used in recent years on Tasmanian farms has changed markedly. The removal of the government bounty on superphosphate in December 1974, a substantial increase in its price and the need to reduce costs because of low prices for many farm products all contributed to a sharp drop in usage. The reintroduction of the bounty in July 1977 has assisted recovery and resulted in increased usage but the quantity applied is still substantially below the pre 1974-75 level.

Changes in government policy on bounties for the use of superphosphate have caused considerable interest in the extent of the concentration of usage. The following table shows the distribution of usage of artificial fertilisers (excluding straight nitrogenous types) according to the quantity used on establishments.

The table shows that establishments using over 50 tonnes accounted for 50.9 per cent of the quantity used in 1978-79 but represented only 11.3 per cent of the total number of establishments that used artificial fertiliser (other than straight nitrogenous types).

**Rural Establishments Classified According to the Quantity of Artificial Fertiliser  
(Other than Straight Nitrogenous Types) Used, Tasmania, 1978-79**

Particulars	Size category (tonnes used)			
	Up to 10	Over 10 and up to 50	Over 50	Total
Number of establishments .....	2 004	2 045	514	4 563
Percentage (a) .....	43.9	44.8	11.3	100.0
Quantity used (tonnes) (b) .....	10 740	48 766	61 740	121 246
Percentage (c) .....	8.9	40.2	50.9	100.0

(a) Of total establishments using fertilisers.

(b) Comprises 90 831 tonnes of superphosphate (including superphosphate with trace elements) and 30 415 tonnes of other types and mixtures.

(c) Of total fertiliser used.

The following table shows the amount of all types of artificial fertiliser used, by the type of crop, for recent years:

**Artificial Fertilisers Used, Tasmania**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Vegetables (a)—</b>						
Area fertilised .....	8 780	10 054	9 911	11 040	10 722	10 993
Fertiliser used—Total .....	7 834	9 719	9 157	10 572	11 200	11 642
Per hectare .....	0.89	0.97	0.92	0.96	1.04	1.06
<b>Fruit—</b>						
Area fertilised .....	4 577	3 346	3 017	2 963	2 713	2 958
Fertiliser used—Total .....	4 505	3 073	2 737	2 743	2 692	2 876
Per hectare .....	0.98	0.92	0.91	0.93	0.99	0.97

## Artificial Fertilisers Used, Tasmania—continued

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Other crops—						
Area fertilised ..... ha	42 158	35 521	32 213	35 589	40 679	47 123
Fertiliser used—Total ..... t	11 678	9 679	9 229	10 738	12 794	14 575
Per hectare ..... t	0.28	0.27	0.29	0.30	0.31	0.31
Pastures (b)—						
Area fertilised ..... ha	724 104	510 594	244 284	343 171	429 183	528 720
Fertiliser used—Total ..... t	156 293	102 390	44 386	60 571	75 249	94 672
Per hectare ..... t	0.22	0.20	0.18	0.18	0.18	0.18
Total usage—						
Area fertilised ..... ha	779 619	559 515	289 425	392 763	483 297	589 794
Fertiliser used ..... t	180 310	124 861	65 509	84 624	101 935	123 765

(a) Vegetables for human consumption only.

(b) 'Pastures' includes lucerne.

## ECONOMIC STATISTICS: AGRICULTURE

It is now possible to produce economic statistics for agriculture on a compatible basis with those produced for the mining, manufacturing, retailing and other sectors of the economy (see the section 'Economic Censuses and Surveys' in Chapter 18). This results from basing the Agricultural Finance Survey (a recently introduced economic sample survey) on the new register of agricultural businesses which was established in 1974-75.

The population identified as the basic framework for the 1974-75 and subsequent Agricultural Finance Surveys consisted of all agricultural *enterprises*, i.e. all enterprises classified to an industry within sub-division 01, Agriculture, of the Australian Standard Industrial Classification (ASIC). This contrasts with the framework used for surveys prior to 1974-75 when the survey population consisted of all agricultural *holdings* (see definition earlier in this Chapter).

The coverage of the 1974-75 and subsequent surveys consists of a randomly selected sample of enterprises which fall within the scope of the survey. In earlier surveys, financial data relating to agricultural activity only were collected but, from 1974-75, data connected with any non-agricultural activity of an agricultural enterprise (such as agricultural services, retailing, transport, etc.) were collected in addition to data about its agricultural activities. Any enterprise which was predominantly engaged in non-agricultural activity was out of scope of the survey.

The main items of interest from the survey for the years 1974-75 to 1977-78 are contained in the following table. Further details and an explanation of the terms used (in addition to those in Chapter 18 of this publication) can be found in the Canberra Office of the Bureau publication 'Agricultural Sector—Part IV Financial Statistics' (Cat. No. 7507.0).

Financial Statistics, Agricultural Enterprises (a)  
(\$ million)

Item (b)	1974-75	1975-76	1976-77	1977-78
Sales from crops .....	33.0	30.2	35.1	39.2
Sales from livestock .....	44.4	36.3	43.8	57.6
Sales from livestock products .....	50.5	57.3	57.7	65.1
Turnover .....	136.2	130.0	144.1	169.9
Purchases and selected expenses .....	71.3	65.2	67.8	82.4
Value added .....	67.9	66.6	77.9	87.2
Adjusted value added .....	59.1	60.2	69.2	77.4
Gross operating surplus .....	40.2	38.6	52.0	59.2
Cash operating surplus .....	30.3	26.3	41.7	49.7
Total net capital expenditure .....	16.8	15.5	18.2	19.4
Gross indebtedness .....	105.8	115.9	100.8	101.8

(a) These figures are estimates based on a sample and are therefore subject to sampling errors. 'Standard errors' indicating the reliability of each item are included in the Canberra Office of the Bureau publication 'Agricultural Sector, Part IV, Financial Statistics' (Cat. No. 7507.0).

(b) See the section 'Economic Censuses and Surveys' in Chapter 18 for definitions.



The only other economic statistics relating to the agricultural industry are the 'Value of Production' series which have now been substantially reduced in scope following the introduction of the surveys. There are basic differences in the two series of statistics and an explanation of these differences and definitions of the terms used for 'Value of Production' purposes are contained in the Appendix to Chapter 8.

### **TASMANIAN DEPARTMENT OF AGRICULTURE**

The functions of the Department of Agriculture are broadly three-fold: regulation, extension or advice, and research.

The regulatory function is the administration of laws relating to agricultural production and the protection of the health of livestock and crops. It includes the operation of port inspection and quarantine facilities and responsibility for the development of policy and continuing review of the Acts and Regulations. Specialist officers in the Department report on aspects of Tasmanian agriculture to parliamentary or other commissions and inquiries.

In the performance of its extension function the Department provides information and advice on all aspects of agricultural production, and encourages the adoption of proven agricultural practices to increase efficiency.

Research is undertaken at research centres in Hobart and Launceston and at five research stations in various parts of the State. This research provides the scientific basis for the extension and regulation functions.

The Department is headed by a Director, assisted by a Deputy Director. It has seven divisions each with its own chief—Animal Health, Animal Production, Plant Production, Plant Pathology, Entomology, Extension and Administration, and two resource sections—Economics and Information. The Head office is in Hobart, and there are subsidiary offices in each of 15 districts covering the whole State, including the Bass Strait islands.

Total expenditure by the Department of Agriculture from Consolidated Revenue in 1978-79 was \$11.4 million compared with \$10.9 million in 1977-78.

### **GOVERNMENT FINANCIAL ASSISTANCE TO RURAL PRODUCERS**

#### **The Agricultural Bank of Tasmania**

##### *The State Advances Act*

In 1907 the Government of the day passed the *State Advances Act* to set up the Agricultural Bank of Tasmania for the purpose of providing financial assistance to a limited section of the rural community.

Just prior to the legislation being enacted, a considerable amount of indiscriminate selection of Crown land had taken place. Most of the settlers had used what small resources they had on development. The location of their holdings and the nature of their proposals were such that normal financial institutions were not interested in providing the further finance required. It was to help these settlers that the Bank was established.

Over the years the legislation was widened and today loans are made to persons engaged in rural industries, irrespective of the nature of the tenure of their holdings, for many of their requirements. Finance is most frequently requested for: the purchase of farm properties; refinancing of mortgages; the purchase of livestock, plant and equipment; land development; structural improvements; and land irrigation. Loans are also made to professional fishermen. During the year ended 30 June 1979, loans totalling \$5.83m were approved for these purposes. Loans outstanding at 30 June 1979 totalled \$15.72m.

##### *Special Relief*

It has been the practice of governments to channel assistance to rural industries through the Agricultural Bank and over the years more than 30 items of rural legislation have been administered. Some have been in respect of State Government assistance only and others in respect of joint assistance by State and Federal Governments. Much of this legislation has been directed at alleviating conditions of hardship following droughts, fires, floods and market downturns. There are still liabilities from borrowers in respect of these areas but no new loans are currently being advanced. The amount outstanding at 30 June 1979 in respect of

loans advanced under the *Primary Producers Relief Act (No. 2) 1947*, the *Flood Relief Act 1960*, the *Primary Producers Relief Acts 1968, 1970 and 1971*, and the *Fire Damage Relief Act 1967* was \$0.69m.

#### **Other Rural Activities of the Bank**

In addition to the provision of loans under the *State Advances Act*, the Agricultural Bank also currently provides assistance under the *War Service Land Settlement Act 1950*, the *Closer Settlement Act 1957*, and the *Rural Adjustment Act 1977*. The purposes and provisions of these Acts are briefly outlined in the following sections.

#### **Closer Settlement Scheme**

Under this scheme the Agricultural Bank may, under certain conditions, acquire freehold land; it can appropriate Crown land and it can purchase land by negotiation. Land so obtained may be developed into farms for allotment to eligible persons. Developed or partly developed farms may also be purchased and allotted and available funds have been directed to this end in recent years.

Properties are made available on a 99-year lease with an option to purchase the freehold. Persons obtaining properties may receive loans to enable them to carry on farming operations. During the year ended 30 June 1979 nine properties were purchased and allotted.

To encourage the settlement of young people on the land the *Closer Settlement Act 1957* was recently amended. This amendment extended the term of the development lease period from 5 to 10 years and in addition it was agreed to keep interest rates in the early years to a minimum. The two initiatives will enable the young settler to improve his equity in the purchased property.

#### **War Service Land Settlement**

In 1944-45 the Federal and State Governments reached agreement on a scheme for the settlement of ex-servicemen on farming properties. Large areas of land were investigated and subsequently over 180 000 hectares were purchased for development and allotment to eligible ex-servicemen. All holdings have been allotted as grants in perpetuity at a pre-determined rental. After a period of six years a settler may, subject to conditions laid down in the Act, exercise a right to convert the property to a freehold title by payment of an option price determined at the time of allotment, or he may transfer his interest in the holding to a person not entitled to receive an allotment under the Scheme.

At 30 June 1979, 161 properties developed under this scheme were occupied by the original settlers, a further 84 settlers had exercised their option to purchase the freehold on their properties, and 234 properties had been re-allocated or were occupied by other than eligible ex-servicemen.

#### **Rural Reconstruction**

On 4 June 1971 an agreement was signed between the Federal Government and the State of Tasmania, the object being the implementation of a national scheme of rural reconstruction; in essence, the Federal Government provides the financial assistance but the detailed administration is vested in the State. Similar federal-state agreements were entered into by the other Australian states on the same date. In October 1971 the Tasmanian Parliament passed the *Rural Reconstruction Act 1971* which established the mechanism for administering the scheme in Tasmania.

As from 1 January, 1977 a further agreement between the Federal and State Governments provided for a Rural Adjustment Scheme.

The Agreement combines into one comprehensive scheme the various forms of rural adjustment which previously had been provided under separate legislation, namely the *Rural Reconstruction Act 1971*, *Dairy Adjustment Program Act 1975* and the *Beef Industry Assistance Act 1975*. The Scheme provides the following forms of assistance:

#### **Debt Reconstruction**

Loans may be made available for the re-arrangement and/or consolidation of a farmer's debts so as to spread the repayments over a longer period and thereby reduce the annual debt-servicing commitment. The problem should be an industry one and not due to circumstances within the farmer's control.

*Farm Build-up*

Farm build-up involves the provision of finance to assist the amalgamation of properties too small to be economic under current conditions. A viable farmer may be assisted to purchase an adjacent uneconomic property.

*Farm Improvement*

Finance may be available to assist the restoration of an uneconomic property to viability by increasing productive capacity of the farm without adding to its size.

*Carry-on Assistance*

This involves the provision of finance for essential carry-on purposes to farmers in industries which Commonwealth and State Governments agree are suffering severe market downturn, excluding circumstances covered by natural disaster arrangements.

*Rehabilitation Assistance*

Assistance of up to \$5 000 is available to a farmer obliged to leave the industry where that assistance is needed to alleviate personal hardship.

*Household Support*

This assistance is available for up to one year to a farmer and is equivalent to what his entitlement under Unemployment Benefits would be if he were eligible for such benefits. It is available while he decides whether to adjust out of farming. The assistance may be extended for a limited period beyond one year in special circumstances.

The following table summarises details of approvals under the *Rural Adjustment Act* 1977 from 1 July 1978 to 30 June 1979:

**Rural Adjustment Assistance, Tasmania, 1978-79**

Type of assistance	Applications		Assistance approved
	Considered	Approved	
	no.	no.	\$'000
Farm build-up .....	33	23	666
Debt reconstruction .....	9	3	87
Farm improvements .....	2	1	5
Carry-on (beef and dairy) loans .....	9	2	7
Rehabilitation .....	1	1	4

**Fruitgrowing Reconstruction Scheme (Tree Removal)**

The acceptance of applications for assistance under this Scheme concluded on 31 December 1976; trees had to be removed by 31 August 1977. The total assistance received by orchardists for the removal of trees was \$2 059 212; 3 268 hectares of orchard was removed.

**Further References***ABS Publications Produced by the Tasmanian Office*

- Agricultural Industry, Tasmania (7101.6) (annual; 1978-79 issue released December 1980, 64 pp.)
- Agricultural Statistics, Principal (Preliminary), Tasmania (7102.6) (annual; 1979-80 released 5-6-80, 3 pp.)
- Livestock Statistics (Final) Tasmania (7201.6) (annual; 1979-80 released 21-11-80, 10 pp.)
- Meat Production, Tasmania (7202.6) (annual; 1979-80 released 14-10-80, 2 pp.)
- Dairying and Dairy Products, Tasmania (7203.6) (annual; 1978-79 released 27-2-80, 6 pp.)
- Poultry Production, Tasmania (7204.6) (annual; 1979-80 released 11-11-80, 2 pp.)
- Wool Production and Disposal, Tasmania (7205.6) (annual; 1978-79 released 21-3-80, 7 pp.)
- Bee Farming, Tasmania (7206.6) (annual; 1979-80 released 1-10-80, 3 pp.)
- Crops and Pastures, Tasmania (7301.6) (annual; 1978-79 released 3-6-80, 10 pp.)
- Apples and Pears in Cool Stores, Tasmania (7302.6) (monthly, seasonal; October 1980 released 19-11-80, 2 pp.)
- Fruit, Tasmania (7303.6) (annual; 1978-79 released 7-5-80, 8 pp.)
- Potato Production, Tasmania (7304.6) (annual; 1978-79 released 21-3-80, 4 pp.)
- Number of Rural Establishments, Irrigation and Fertiliser Usage, Tasmania (7401.6) (annual; 1978-79 released 15-2-80, 7 pp.)
- Value of Agricultural Commodities Produced, Tasmania (7501.6) (annual; 1978-79 released 31-6-80, 5 pp.)

*ABS Publications Produced by the Canberra Office*

- Agricultural Sector, Part I—Structure of Operating Units (7102.0) (annual; 1977-78 issue released 6-6-79, 34 pp.)
- Agricultural Land Use, Improvements and Labour (7103.0) (annual; 1978-79 released 29-8-80, 18 pp.)
- Principal Agricultural Statistics: First estimates (7201.0) (annual; 1979-80 released 23-5-80, 4 pp.)
- Livestock Statistics (7203.0) (annual; March 1980 released 3-12-80, 22 pp.)
- Meat, Australia (7204.0) (monthly; November 1980 released 14-1-81, 4 pp.)
- Meat, Australia (7205.0) (quarterly; September quarter 1980 released 9-1-81, 30 pp.)
- Meat Statistics (7206.0) (annual; 1978-79 released 29-2-80, 33 pp.)
- Chicken Hatchings and Poultry Slaughterings (7207.0) (monthly; October 1980 released 12-1-81, 4 pp.)
- Milk Statistics (7208.0) (monthly; September 1980 released 5-12-80, 3 pp.)
- Dairying and Dairy Products (7209.0) (annual; 1979-80 released 21-1-80, 17 pp.)
- Wool Production and Shearing (Preliminary Estimates) (7210.0) (annual; 1980-81 released 22-7-80, 1 p.)
- Wool Statistics, Australia (7212.0) (annual; 1978-79 released 19-5-80, 17 pp.)
- Sheep Numbers, Shearing and Wool Production Forecast (7211.0) (annual; 1978-79 released 20-12-78, 2 pp.)
- Wool Statistics (7212.0) (annual; 1977-78 released 29-6-79, 23 pp.)
- Beekeeping (7214.0) (annual; 1977-78 released 16-1-79, 5 pp.)
- Crop and Fruit Statistics (Preliminary) (7301.0) (annual; 1978-79 released 12-9-79, 7 pp.)
- Crop Statistics (7302.0) (annual; 1977-78 released 31-5-79, 22 pp.)
- Fruit Statistics (7303.0) (annual; 1977-78 released 17-7-79, 25 pp.)
- Cereal Grains: Estimates of Intended Sowings (7304.0) (annual; March 1980 released 1-6-79, 3 pp.)
- Cereal Grains: Estimates of Area Sown (7305.0) (annual; 1979-80 released 12-9-79, 2 pp.)
- Cereal Grains: Estimates of Wheat Production (7306.0) (annual; 1978-79 released 7-12-78, 2 pp.)
- Wheat Statistics (7307.0) (annual; 1977-78 released 5-7-79, 26 pp.)
- Mushroom Statistics (7308.0) (annual; 1977-78 released 19-12-78, 2 pp.)
- Nursery and Flower Statistics (7309.0) (annual; 1978-79 released 9-5-79, 2 pp.)
- Gross Value of Agricultural Commodities Produced First Estimates (7501.0) (annual; 1978-79 released 3-7-79, 1 p.)
- Value of Agricultural Commodities Produced (7503.0) (annual; 1977-78 released 19-7-79, 29 pp.)
- Agricultural Sector Part IV—Financial Statistics (7507.0) (annual; 1977-78 released 26-9-79, 34 pp.)
- Agricultural Sector Part IV—Financial Statistics (Preliminary) (7508.0) (annual; 1977-78 released 1-5-79, 4 pp.)

## **Chapter 8**

### **FORESTRY, MINING AND FISHERIES**

#### **FORESTRY**

##### **Introduction**

When the first explorers ventured beyond the main coastal areas of mainland Australia, they encountered arid zones and desert nearly devoid of timber. By contrast, in Tasmania dense and continuous forest was the main barrier to early penetration, although the early settlements were sited in open savanna-like country which originated from firing by the Tasmanian natives. No other Australian state has similar widespread conditions favourable for forest growth: a cool temperate climate; and an assured annual rainfall varying from 500 to 3 800 millimetres according to locality, and showing relatively small seasonal variation.

During the period since the first settlement in 1803, land clearing, timber exploitation and fires have left their mark; however the Forestry Commission estimates that the current total forest area (including some forest of little or no commercial value) is 2 802 000 hectares (i.e. about 40 per cent of the State's total area of 68 300 sq km).

##### **Forest Area**

Of all the Australian states, Tasmania is unique in its concentration of forest resources. Native forests of potentially commercial quality cover 2 136 000 hectares (or 31 per cent of the State's area). Of this area 859 000 hectares are privately owned and 1 277 000 hectares are Crown-owned commercial forest.

The need for permanent reservation of land for timber production was first officially recognised by the *Waste Lands Act* 1881 and the first forest reservation occurred in the late 1880s when some 21 270 hectares were gazetted. Reservations had reached 403 660 hectares by 1910 and 651 890 hectares at the time of World War II. An on-going program of dedication of suitable lands as State forests in perpetuity is a firm undertaking in the Commission's policy. The gazetted area at 30 June 1979 was 1 517 500 hectares towards a target of 1 618 000 hectares of permanent State-owned forests managed for the benefit, both material and environmental, of future generations. In addition to the State forests there are 'timber reserves' (land reserved for the supply of timber, including fuel); at 30 June 1979 the area of timber reserves was 94 500 hectares.

The State forests are located, in the main, in five distinct regions: (i) far north-west about the axis of the Arthur River; (ii) north-eastern highlands; (iii) north and north-west of the Great Lake; (iv) from the south coast, north to Lake King William; and (v) the east coast area.

##### ***Classification of State Forests and Timber Reserves***

A classification of State forests, timber reserves and land acquired for forestry purposes is set out in the following table:

**Classification of State Forests and Timber Reserves, Tasmania at 30 June 1979**  
(<sup>'000 Hectares</sup>)

Forest type	Area
Eucalypt forest with a mature or potential mature height over 41 m .....	375
Eucalypt forest with a mature or potential mature height of 15 m to 41 m .....	719
Temperate rain forest ( <i>N. cunninghamii</i> ) and associated species .....	171
Plantations (mainly <i>P. radiata</i> ) .....	32
Total forest area .....	1 298
Non-productive forests and other land included for protection purposes .....	314
Total .....	(a) 1 612

(a) Comprised: State forest, 1 517 500 hectares (gazetted State forest only); timber reserves, 94 500 hectares.

**Timber Concession and Reserve Areas**

The establishment in Tasmania of various industries using forest resources has given rise to the need for some guarantee of assured timber supplies to those industries. Therefore, certain concessions and cutting rights on Crown lands have been awarded to companies relying on forest products as their raw materials. The map on the following page shows the location of concession and reserve areas in Tasmania. Concession areas are those areas where a company is at present allowed to operate while reserve areas are set aside for future use. Providing that the company meets certain stipulated conditions, permission to remove timber from the reserve area will be granted by the Forestry Commission.

**Plantations**

The scarcity of native softwoods is being met, in part, by the creation of exotic plantations, the principal species grown being *Pinus radiata*, but at 30 June 1979 the softwoods plantations (49 000 hectares) accounted for only 1.7 per cent of the State's total forested area. The Forestry Commission had established almost 32 000 hectares of softwood plantations in Tasmania by 31 March 1979.

The following table shows the area of softwood and hardwood plantations established by the Forestry Commission (but excludes privately owned areas):

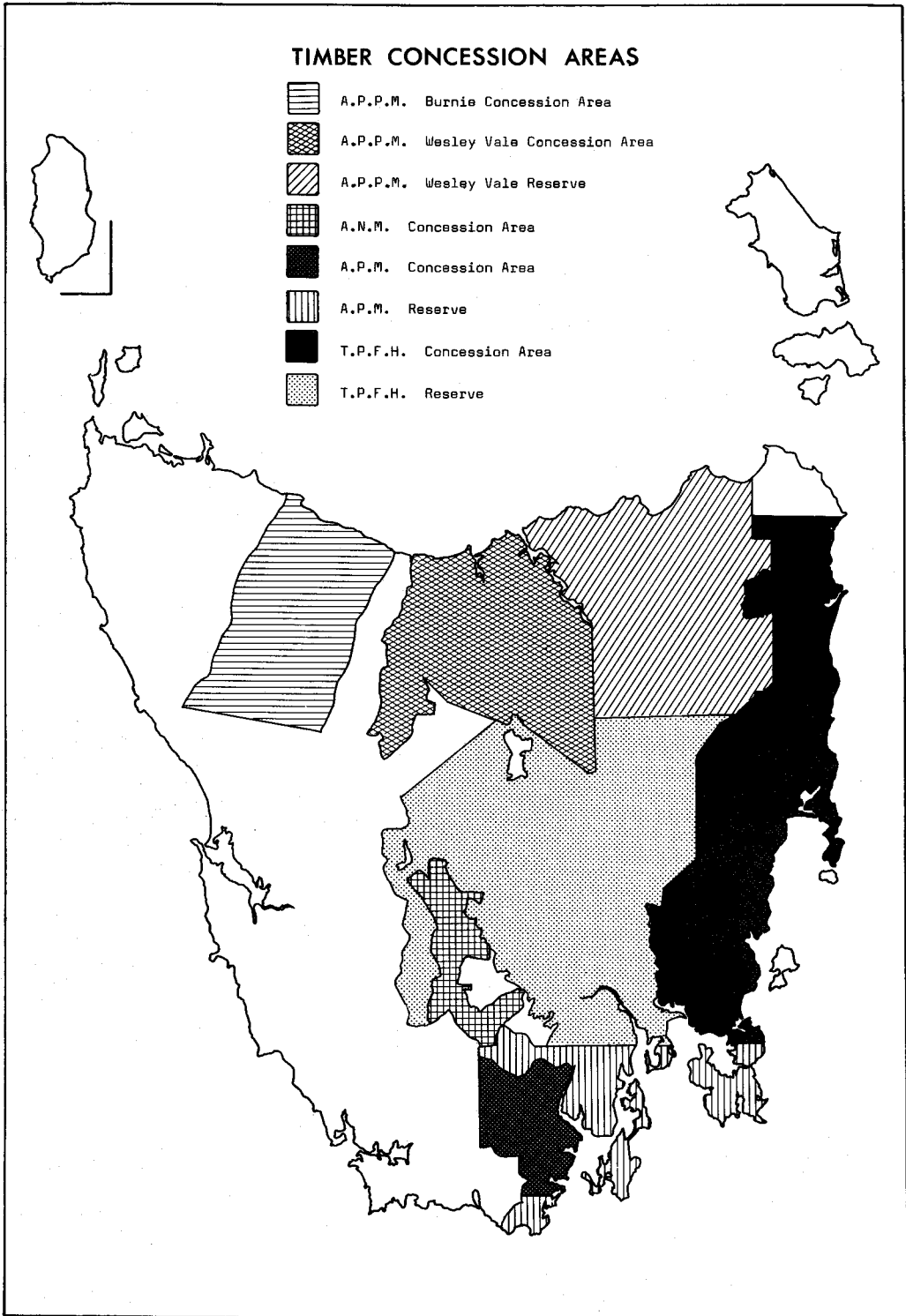
**Area of Forestry Commission Plantations, Tasmania at 31 March**  
(Hectares)

District	1978			1979		
	Softwood	Hardwood	Total	Softwood	Hardwood	Total
Smithton .....	—	9	9	—	9	9
Burnie .....	3 001	311	3 312	3 025	312	3 337
Devonport .....	5 526	33	5 559	5 923	15	5 938
Queenstown .....	1 749	—	1 749	2 169	—	2 169
Launceston .....	809	16	825	855	20	875
Deloraine .....	—	—	—	—	34	34
Scottsdale .....	8 041	12	8 053	8 453	47	8 500
Fingal .....	10 950	—	10 950	11 398	41	11 439
Triabunna .....	—	92	92	—	92	92
Geeveston .....	86	76	162	87	190	277
Total .....	30 162	549	30 711	31 910	761	32 671

In May 1974, following the calling of tenders for cutting rights in *Pinus radiata* plantations in the north-east of Tasmania, a substantial sale of sawlogs was made and resulted in the establishment of a milling complex near Scottsdale. The green mill was destroyed by fire in February 1978. This was rebuilt and operations resumed in March 1979. The production level reached the levels allowed for in the 1974 tender later in the year.

**Tasmanian Forest Types**

The better quality forests largely occur where the annual rainfall exceeds 760 mm, but soil quality and the frequency of past fires also influence distribution. This productive native forest estate consists of four main vegetation types: dry sclerophyll; open; wet sclerophyll;



and temperate rain forests (sclerophyll means hard leaved). The rain forest is principally located in the western half and to a lesser extent in the north-east highlands; the other three types (eucalypt forest) predominate elsewhere. The rain forest is characterised by the dominance of *Nothofagus cunninghamii* (myrtle), *Atherosperma moschatum* (sassafras), *Eucriphia lucida* (leatherwood) and other trees which appear on poorer soils. *Acacia melanoxylon* (blackwood) grows where rain forest has been disturbed in the past; principally where fires have occurred.

Eucalypt forests of good quality are not common on soils of reasonable depth and fertility where the annual rainfall is below 760 mm. Where the rainfall is above 1 130 mm, rain forest species appear in the understorey but are excluded should fires occur, say, every 40 to 50 years. With rainfall above 1 520 mm rain forests can exclude eucalypts. However, even with rainfall well above 1 520 mm, a combination of poor soils and frequent burning often produces areas of button grass and heathy plains.

Tasmanian forests are cut almost exclusively for hardwood (eucalypts), the slow growing native softwoods never having been very plentiful. The principal softwood species which have been utilised are *Athrotaxis selaginoides* (king billy pine), *Dacrydium franklinii* (huon pine) and *Phyllocladus aspleniifolius* (celery-top pine).

**Hardwoods:** The most valuable eucalypts are those which belong to the so-called ash group—*E. obliqua* (stringy-bark), *E. delegatensis* (gum-top stringy-bark or alpine ash) and *E. regnans* (swamp gum or mountain ash). In the south and south-east *E. Globulus* (Tasmanian blue gum) occurs in high quality forests. In areas where the annual rainfall is below 760 mm, the more important eucalypts are *E. amygdalina* (black peppermint), *E. ovata* (swamp or black gum), *E. viminalis* (white gum), *E. obliqua* (stringy-bark) and *E. linearis* (white peppermint).

Tasmania offers 11 tree types suitable for pulpwood, of which 10 are eucalypts. The eleventh is the myrtle (*Nothofagus cunninghamii*), a rain forest hardwood available in the north-west of the island. The eucalypts can be graded into:

- |  |   |
|--|---|
| (i) First quality (four species)—          | <i>E. obliqua</i> (stringy-bark) (a) (b)              |
|  | <i>E. delegatensis</i> (gum-top stringy-bark) (a) (b) |
|  | <i>E. regnans</i> (swamp gum) (b)                     |
|  | <i>E. sieberi</i> (ironbark)                          |
| (ii) Second quality (three 'gums')—        | <i>E. viminalis</i> (white gum) (a) (b)               |
|  | <i>E. globulus</i> (blue gum) (a)                     |
|  | <i>E. ovata</i> (swamp or black gum) (b)              |
| (iii) Third quality (three 'peppermints')— | <i>E. amygdalina</i> (black peppermint) (a) (b)       |
|  | <i>E. linearis</i> (white peppermint)                 |
|  | <i>E. tasmanica</i> (silver peppermint)               |

Two species of eucalypt—*E. delegatensis* and *E. obliqua* account for over 60 per cent of all eucalypt logs cut for woodchipping. The east coast offers all 10 varieties of which the five marked (a) are the common ones. The north coast offers, in useful quantity, only the six varieties marked (b).

**Softwoods:** Although Tasmania's native forests produce some very valuable softwood timber, these are very slow growing and in short supply. For this and other reasons, attention has been given to building up another section of the total forest estate—namely, plantations of exotic species, particularly *Pinus radiata*. At mid-1979 there were 32 000 hectares of State owned pine plantations with another 17 000 hectares on private land.

## Forest Utilisation

### Introduction

An extensive sawmilling industry has been a major and traditional part of the Tasmanian scene since the mid 19th century. This was originally an industry solely reliant on native forests for its raw material, although now (and in the future) plantations of exotic softwoods play an important role in supplying the industry. For a number of years usage of logs for sawing, peeling and slicing remained at over 1 000 000 cubic metres per annum but usage has



dropped since 1974-75 to a level of 928 000 cubic metres in 1979-80, when 350 000 cubic metres of sawn, peeled and sliced timber was produced.

However, typical native forests produce much wood not suitable for sawmilling and in 1937 a start was made on the use of this previously wasted resource for the manufacture of paper at Burnie. Since that time, the use of pulpwood has expanded, particularly in the present decade, producing pulp paper, building panel-boards and raw woodchips. In 1941 the only newsprint mill in Australia was established at Boyer on the Derwent; more recently, in 1962, a pulp mill began operations at Port Huon in the south. A further pulp and paper mill commenced production during 1970 at Wesley Vale near Devonport. Further utilisation of forestry products has been introduced by factories producing plywood, hardboard, particle board and woodchips (for export).

Establishment of the woodchip industry and the expansion of other timber-using industries has resulted in greatly increased annual timber requirements necessitating careful utilisation of existing forest resources and the development of viable reforestation schemes.

The problem of possible overtaxing of existing resources has been met partly by the implementation of fully integrated forest operations wherever possible. These operations ensure maximum use of the resource, with the best logs going to sawlogs and the remaining merchantable timber being processed as pulpwood. This also facilitates regeneration of the forest as most of the standing trees are removed, hence decreasing competition for available nutrients and light.

Pulpwood is also obtained from waste produced during sawmilling. During 1969-70, the year preceding the first export of woodchips, approximately 25 per cent of sawmill waste was chipped for re-use. As a direct consequence of the woodchip export trade the proportion rose to over 60 per cent in 1976-77 and had reached nearly 80 per cent in 1979-80.

Thinnings from Forestry Commission *Pinus radiata* plantations are used for sawlogs, treated fence posts, particle board manufacture at Wesley Vale and production of pulp for manufacture of paper at Burnie, Wesley Vale and Boyer.

Regeneration of areas harvested is carried out by the Forestry Commission and by the companies themselves. On Crown land reforestation is mandatory, the work in some areas being done by the companies and in other areas by the Forestry Commission. Industries utilising privately owned forest resources have established incentive schemes to encourage reforestation.

### Total Log Usage

The next table shows total log usage by the sawmilling, paper making, chipping and allied industries for recent years:

Hardwood and Softwood Log Usage, Tasmania  
(<sup>'000 m<sup>3</sup></sup>)

Year	Sawmilling and plywood milling	Chipping, grind- ing and flaking	Total
1974-75 .....	1 071	2 866	3 938
1975-76 .....	985	2 396	3 381
1976-77 .....	986	2 913	3 900
1977-78 .....	906	2 751	3 658
1978-79 .....	863	2 941	3 803
1979-80 .....	928	3 594	4 522

### Timber Using Industries

Normally the Bureau does not publish information relating to any single enterprise or establishment but only publishes statistical aggregates where these do not directly or indirectly reveal the operations of any single informant. However, a description of some of the State's major timber using companies is obviously desirable; therefore, the Forestry Commission has supplied the details given below.

#### Paper, Hardboard and Particle Board

Associated Pulp and Paper Mills Ltd and subsidiaries manufacture paper at Burnie and particle board and paper at Wesley Vale. Their hardboard mill closed at the end of the 1977-

78 financial year after 27 years production, largely due to a significant decrease in demand by the export market and the highly competitive nature of the reconstituted wood panelling industry in Australia. The Company owns 101 172 hectares of forested land and holds cutting rights over Crown land for 24 kilometres on each side of the Emu Bay railway line from the north coast to the Pieman River.

In 1970 the Company completed the first stage of its pulp and paper mill at Wesley Vale at a cost of \$25 million. The first paper machine installed has an annual capacity of 41 000 tonnes of magazine paper and provision has been made for the installation of three additional machines. However, expansion at Wesley Vale has been deferred due to economic conditions and the difficulty of financing the very high capital cost of the project at the present. An alternative expansion project at the Burnie mill costing \$25 million to produce bleached, softwood pulp from Company and Forestry Commission softwood plantations has been completed.

#### *Newsprint*

*Australian Newsprint Mills Ltd* situated at Boyer on the Derwent River is Australia's sole manufacturer of newsprint. Its timber concession follows the general line of the Derwent as far north as Lake King William.

The *Florentine Valley Paper Act* 1966 increased A.N.M.'s concession area from 110 479 hectares to 150 948 hectares to provide the basis for an expansion program. The Company is required by the Act to supply 30 100 cubic metres of logs to other timber-using industries each year. The plant ran at almost full capacity during 1977-78 and produced 208 000 tonnes of newsprint. Machinery was installed in 1978 to manufacture a special type of thermo-mechanical pulp from *Pinus radiata* which will partly replace imported Kraft chemical pulp. The *Pinus radiata* pulpwood for this project is being drawn from thinnings from the Forestry Commission *Pinus radiata* plantations near Scottsdale.

#### *Woodpulp*

*Australian Paper Manufacturers Ltd* manufacture woodpulp at Port Huon on the Huon River. The pulp is shipped in pellet form to the Company's paper mills in other states, principally to Botany, N.S.W. The Company's pulpwood concession and reserve areas include virtually the whole of the D'Entrecasteux Channel coastline and the south coast as far west as Prion Bay; inland it extends west to the Mt Picton area. Also included in the reserve are Bruny Island and the Tasman Peninsula.

#### *Woodchips*

Woodchips manufactured from sawmill waste and other timber previously of limited commercial value, are primarily used for woodpulp production. Three Tasmanian companies, Northern Woodchips Pty Ltd, Tasmanian Pulp and Forest Holdings Ltd and Associated Pulp and Paper Mills Ltd have woodchip export contracts with Japanese interests. Before granting woodchip export licences, the Federal Government stipulated that the companies, if they did not already have the capacity, should develop woodpulp manufacturing facilities within 15 years. The export of woodchips from Tasmania commenced in 1971. Articles on each of the three companies' woodchip operations were included in the 1975 edition of the *Year Book*.

Tasmanian Pulp and Forest Holdings Ltd's plant at Spring Bay, near Triabunna on the east coast, has an annual capacity of more than 610 000 tonnes of woodchips. Timber for the project comes from pulpwood concession areas extending along the Eastern Tiers over some 220 kilometres from Murdunna in the south to Eddystone Point in the north. The Company has also been granted concessions over reserve areas covering much of central Tasmania. These areas will ultimately be used provided Tasmanian Pulp and Forest Holdings Ltd meets various stipulations contained in the *Pulpwood Products Industry (Eastern and Central Tasmania) Act* 1968. In addition, the Company is permitted to obtain pulpwood from areas in the reserve set aside by the Forestry Commission for silvicultural purposes or by utilising trees removed to open the forest for economic extraction of milling-quality timber.

The Company's first woodchips were exported from the Spring Bay complex in April 1971; since then, the Company has exported approximately 600 000 tonnes of woodchips per annum.

Associated Pulp and Paper Mills Ltd and Northern Woodchips Pty Ltd constructed their woodchip plants at Long Reach, near Bell Bay, on the Tamar River. Northern Woodchips Pty

Ltd has also installed portable and satellite chipping plants in the northern half of Tasmania. A.P.P.M. Ltd draws its timber supplies from Crown forest concessions, private land and sawmill waste, while Northern Woodchips Pty Ltd relies on timber from private lands and sawmill waste. Annual capacity of the A.P.P.M. Ltd plant is 914 500 tonnes of woodchips; Northern Woodchips Pty Ltd's 15-year export contract is for an annual 711 000 tonnes of woodchips.

Both companies commenced production of woodchips in 1972; A.P.P.M. at its Long Reach plant in May 1972 and Northern Woodchips from its portable and satellite chipping plants in mid-1972. First exports by the two companies were made in late 1972. In February 1973 the first log trains commenced using the rail extension to Long Reach giving the two companies economic access to more distant timber supplies.

In September 1979, Associated Pulp and Paper Mills Ltd were successful in a take-over bid for Tasmanian Pulp and Forest Holdings Ltd. Tasmanian Pulp and Forest Holdings Ltd continued to trade as a separate company to Associated Pulp and Paper Mills Ltd's export operations in the north of the State.

In 1979, Northern Woodchips Pty Ltd signed a contract with the Forestry Commission of Tasmania to harvest a maximum of 220 000 tonnes of pulpwood per year from State forests in the far north-west of the State. This pulpwood was to be in the form of forest residues from the existing sawmill operations in this area, together with standing fire-killed trees. This wood was to be taken under Northern Woodchips' existing export licence and in lieu of standing green pulpwood from private property.

## Forest Production

### Definition

The cutting of logs in a forest and the production of sawn timber in a mill seem closely related activities and may both, in fact, be conducted by a single operator with the same team of employees; similarly, the cutting of pulpwood and its later conversion to newsprint or fine paper may be viewed, in a broad sense, as a single activity. For statistical purposes, however, sawmills, paper mills, newsprint mills, woodchip plants, etc., are classified as factories, while logging operations which provide the raw materials for the factories, are classified as forestry activity. It necessarily follows that the definition of forest production must be restricted to include only the output of logs, hewn timber, firewood, tanning bark, etc. before such products have passed into the sector covered by factory statistics. Some forestry products, as just defined (e.g. fence posts and rails, hewn sleepers, firewood, etc.) may go direct to the final consumer without passing as a raw material to the factory sector.

### Value of Forest Production

*Gross Value of Production* is the value placed on the recorded production at the wholesale price realised in the principal markets. In cases where forestry products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets (e.g. the value of logs cut for saw milling is the value on the mill skids).

*Local Value* (i.e. value of recorded production at the place of production) is ascertained by deducting marketing costs from gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.

### Statistics of Forest Production

The next table shows the production of the various forest products and from where they are obtained, i.e. either Crown or private land. In this table, the 'Logs for processing' figures include the log usage of the woodchip export industry. Woodchips have been an input material for locally based paper and woodpulp plants for many years but demand increased greatly with the establishment of woodchip export markets from 1971.

The following table shows details of forest production:

## Forest Production, Tasmania, 1978-79

Product	Obtained from—		Total
	Crown land	Private land	
Logs for processing (a)—			
Forest hardwoods ..... '000 m <sup>3</sup>	2 128	1 516	3 643
Indigenous softwoods ..... '000 m <sup>3</sup>	9	—	9
Plantation grown pines ..... '000 m <sup>3</sup>	126	25	151
Total logs—Quantity ..... '000 m <sup>3</sup>	2 263	1 540	3 803
Gross value ..... \$'000	n.a.	n.a.	60 402
Hewn and other timber (b)—			
Quantity ..... '000 m <sup>3</sup>	43	n.a.	n.a.
Value ..... \$'000	n.a.	n.a.	(c) 5 656
Total gross value of forest products ..... \$'000	n.a.	n.a.	66 058

(a) Logs for sawing, peeling, slicing, chipping and pulping. Includes any logs exported or stockpiled; excludes chain-sawn sleepers, etc. which are included below under 'Hewn and other timber'.

(b) Includes firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products.

(c) Includes estimates of the value of hewn and other timber taken from private land.

The next table shows details of forest production for a five-year period on a basis comparable with the previous analysis:

## Forest Production, Tasmania

Product	1974-75	1975-76	1976-77	1977-78	1978-79
Logs for processing (a)—					
Forest hardwood ..... '000 m <sup>3</sup>	3 916	3 347	3 763	3 534	3 643
Indigenous softwood ..... '000 m <sup>3</sup>	11	10	10	8	9
Plantation grown pines ..... '000 m <sup>3</sup>	70	73	122	116	151
Total logs—Quantity ..... '000 m <sup>3</sup>	3 997	3 430	3 894	3 658	3 803
Gross value ..... \$'000	46 234	42 496	50 129	54 939	60 402
Hewn and other timber—					
Value (b) ..... \$'000	3 788	4 495	5 300	5 707	5 656
Total gross value of forest products ..... \$'000	50 022	46 991	55 429	60 645	66 058

(a) Logs for sawing, peeling, slicing, chipping and pulping. Includes any logs exported or stockpiled; excludes chain-sawn sleepers, etc. which are included below under 'Hewn and other timber'.

(b) Includes the value of firewood, sleepers, transoms, girders, bridge timber, mining timber, poles, piles and other forest products taken from Crown land and estimates of the value of hewn and other timber, firewood and other forest products taken from private land.

## Source of Production Data

The principal sources of data are the returns of the various establishments classified as factories (e.g. sawmills, newsprint mills, paper mills, plywood mills, etc.) which report details of logs, pulpwood, sawmill edgings, off-cuts, etc. used as raw materials; other data are available from the State Forestry Commission and the Bureau's export statistics.

## Tasmanian and Australian Log Production

For the purposes of the last two tables, log production is defined as relating to 'logs' for sawing, peeling, slicing, chipping and pulping (i.e. it includes logs used in sawmills as well as those used for production of woodpulp in newsprint and paper mills, woodchips, particle board, etc.). In terms of this definition, of the Australian states, Tasmania is the major producer, the State's log production being over 30 per cent of the Australian total in 1978-79. The two next largest producers, N.S.W. and Victoria, produced 21 per cent and 17 per cent of the total Australian production, respectively, in 1978-79. Considering Tasmania's small relative size and population, it is apparent that forest production forms one of its more important contributions to the Australian economy.

## Gross and Local Value of Production

The following table gives details of gross and local value of forestry production for a five-year period:

**Gross and Local Value of Forestry Production, Tasmania  
(\$'000)**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Gross value (production valued at principal markets) .....	50 022	46 991	55 429	60 645	66 058
Less marketing costs .....	7 160	6 317	7 528	7 152	12 104
Local value (production valued at place of production) .....	42 862	40 674	47 901	53 494	53 954

**Timber and Timber Products**

**Output and Exports**

The following table shows timber production by mills, together with exports of sawn timber for recent years:

**Production and Exports of Sawn Timber, Tasmania**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
<b>LOGS USED ('000 m<sup>3</sup>)</b>						
Hardwood .....	1 023	930	895	816	789	771
Softwood .....	48	54	92	91	74	157
Total .....	1 071	985	986	906	863	928
<b>SAWN, PEELED AND SLICED TIMBER PRODUCED (a) ('000 m<sup>3</sup>)</b>						
Hardwood .....	388	350	331	299	289	284
Softwood .....	22	24	37	39	31	66
Total .....	410	373	368	339	321	350
<b>EXPORTS OF SAWN TIMBER (b)</b>						
Quantity .....	213	248	313	245	238	n.y.a.
Value .....	22 690	26 079	37 083	28 213	37 100	n.y.a.

(a) Includes: plywood, veneer and sliced timber production converted to an equivalent cubic measurement; and rough sawn timber, including that subsequently seasoned and dressed to produce flooring, weatherboards, etc.

(b) Includes dressed and undressed timber.

**Geographical Distribution of Sawmills**

The next table records the overall decline in the number of mills over recent years. The areas with the heaviest incidence of closures have been the north-eastern and southern regions.

**Distribution of Operative Sawmill and Plywood Mill Locations  
by Statistical Divisions and Sub-divisions**

Statistical divisions and sub-divisions	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Hobart .....	14	12	13	12	12	11
Southern .....	73	64	56	43	48	43
Northern—						
Tamar .....	56	55	52	48	43	39
North Eastern .....	30	27	25	21	19	19
Total .....	86	82	77	69	62	58
Mersey-Lyell—						
North Western .....	38	36	34	30	36	34
Western .....	7	7	7	7	8	7
Total .....	45	43	41	37	44	41
Tasmania .....	218	201	187	161	166	153

### Average Size of Mills

In the year 1963-64 no Tasmanian sawmill exceeded an annual log input of 25 000 cubic metres. A size distribution of mills, classified by volume of log inputs, for recent years is given in the next table:

**Number of Operative Sawmills (including Plywood Mills)  
by Volume of Annual Log Input, Tasmania**

Size classification (cubic metres)	Number of Sawmills and plywood mills					
	1973-74	1974-75	1975-76 (a)	1976-77	1977-78	1978-79
Up to 500 .....	50	53	7	4	2	1
501- 1 000 .....	28	19	7	3	3	1
1 001- 1 500 .....	11	10	8	8	3	2
1 501- 3 000 .....	33	28	19	23	13	15
3 001- 5 000 .....	30	26	26	19	19	22
5 001-10 000 .....	40	35	36	38	22	18
10 001-15 000 .....	14	14	10	7	8	8
15 001-30 000 .....	8	11	10	9	11	13
30 001-45 000 .....	2	4	4	4	2	2
45 001-60 000 .....	1	—	1	1	2	—
Over 60 000 .....	1	1	—	1	—	1
Total .....	218	201	128	117	85	83

(a) From 1975-76 includes only mills employing four persons or more; data has been extracted from manufacturing census results.

### Mill Production of Timber

As shown previously, logs treated in sawmills and plywood mills during 1979-80 for the production of sawn, peeled, and sliced timber totalled 928 000 m<sup>3</sup> while the resulting timber produced totalled only 350 000 m<sup>3</sup>. The difference between the volume of logs treated and of timber produced is not all waste from the millers' point of view. Admittedly, there is very limited use for sawdust but most offcuts are sold as input to the woodchip and woodpulp industries or docked and sold as firewood.

### Chipping, Grinding and Flaking of Wood

Chipping, grinding and flaking of wood is the first process in the production of wood pulp, paper, etc. Up to 1969-70 all chipped, ground and flaked wood was used in local plants making wood pulp, paper, hardboard and particle board. However, from 1970-71 production of woodchips for overseas exports has also been undertaken.

The importance of woodchipping for export is indicated by the following table:

**Chipping, Grinding and Flaking of Wood, Tasmania**

Particulars		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Producing locations at 30 June	no.	31	31	32	31	32	32
Materials used—							
Logs (a)	'000 m <sup>3</sup>	2 866	2 396	2 913	2 751	2 941	3 594
Sawmill offcuts	'000 m <sup>3</sup>	246	216	248	261	264	291
Total	'000 m <sup>3</sup>	3 113	2 612	3 161	3 012	3 204	3 885
Chipped, ground and flaked wood produced (green weight)—							
For local processing	'000 t	786	744	832	797	781	871
For export	'000 t	2 161	1 693	2 135	2 041	2 197	2 801
Total	'000 t	2 947	2 436	2 967	2 838	2 978	3 672

(a) Includes log equivalent of limbwood and billets.

### The State Forestry Commission

The principal officers of the State Forestry Commission are the chief commissioner and three assistant commissioners. At 30 June 1979 the Commission employed a work force of 745 including administrative staff.

The Forestry Commission is primarily concerned with the conservation of Tasmania's State Forests; this requires that it exercise control over the rate at which logs and pulpwood are taken, and also that it introduce effective measures to ensure regeneration. Other important functions include: (i) road construction, providing access to State forests; (ii) maintaining an annual program of softwood planting; (iii) protection of the forest estate from damage by fire, insects and disease; (iv) research, which aims to improve forest health and growth while developing more effective techniques of forest regeneration and fire protection; and (v) the management of State forests for recreation and wildlife conservation.

#### Private Forestry

The Forestry Commission's responsibility for State forests was widened by the *Forestry Act 1977*, which empowered the Commission to promote the development and proper management of private forests. The Act provided for a Private Forestry Council to advise the Forestry Commission on private forestry and a Private Forestry Division to provide advice and assistance to forest owners. Both these organisations were officially established in September 1978.

The activities of the Private Forestry Division have many facets, extending well beyond the administration of financial assistance schemes. It has to consider and recommend on the wise use of the private forest resource, which is of major importance to Tasmania's on-going industrial potential. An inventory review of the private forest resource and a survey of the loss of forest to agriculture have been commenced. Together, these will determine an acceptable rate of private forest cutting and the need for assistance in reafforestation.

Four assistance schemes have been established: The Pine Plantation Development Loan Scheme; the Pine Plantation Nursery Stock Grant Scheme; the Native Forest Restoration Grant Scheme; and the Eucalypt and Native Species Plantation Grant Scheme.

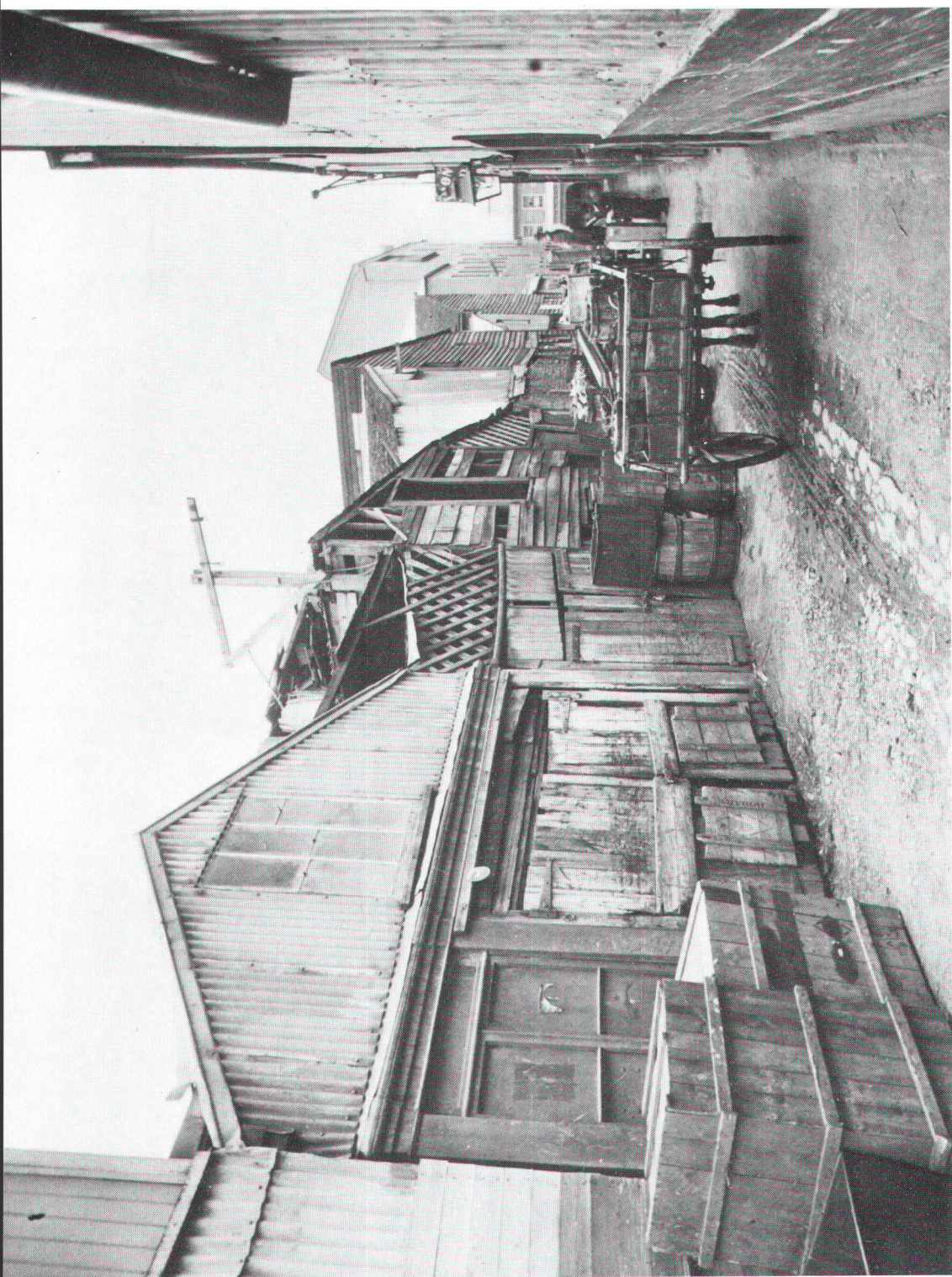
The Division has an expanding role in educating and advising landowners on the management, protection and sale of timber from existing forests. A wide range of informational material has been produced. The response from landowners is such that the Private Forestry Division will be fully committed in implementing the provisions of the Act.

Activities of the Forestry Commission, Tasmania: Summary  
(Source: Forestry Commission)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Area prepared for regeneration						
burning ..... ha	4 492	7 296	3 848	5 316	5 484	5 011
Seedlings produced ..... '000	2 901	3 707	3 966	3 849	2 810	3 385
Plantations—						
Established during year ..... ha	1 903	1 776	2 198	1 965	1 966	1 920
Pruned ..... ha	454	368	330	561	813	159
Thinned ..... ha	409	455	367	351	360	399
Firebreaks—						
Constructed ..... km	73	54	90	68	62	82
Roads—						
Constructed ..... km	103	129	205	168	137	128
Improved ..... km	12	25	86	24	34	9

The Commission has a responsibility for controlling forest fires on or near State forests; losses through bush fires fought by the Commission in recent years are reported in the following table:

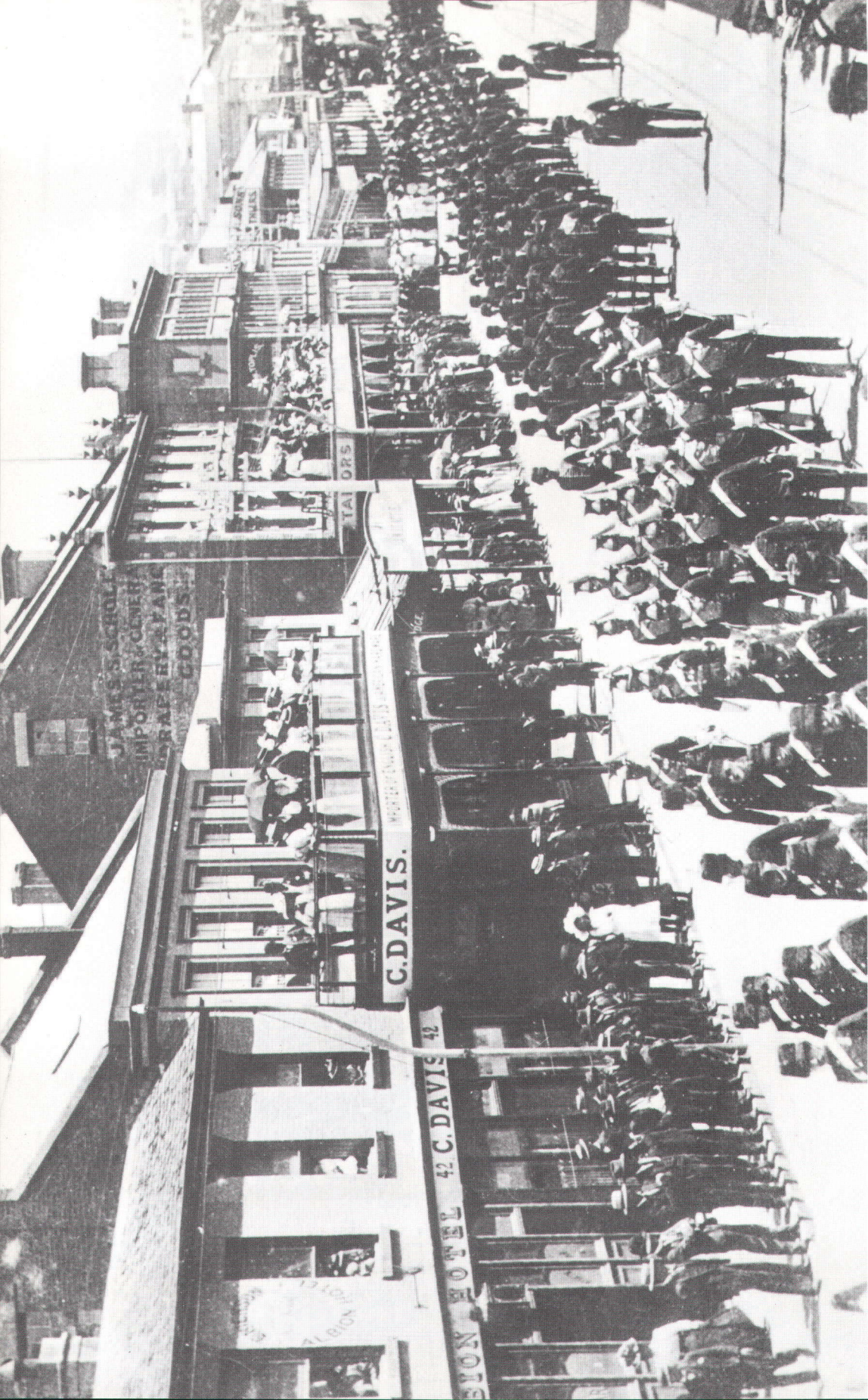




Cat and Fiddle Alley, Hobart, C. 1900

[Beattie's Studio, copyright]

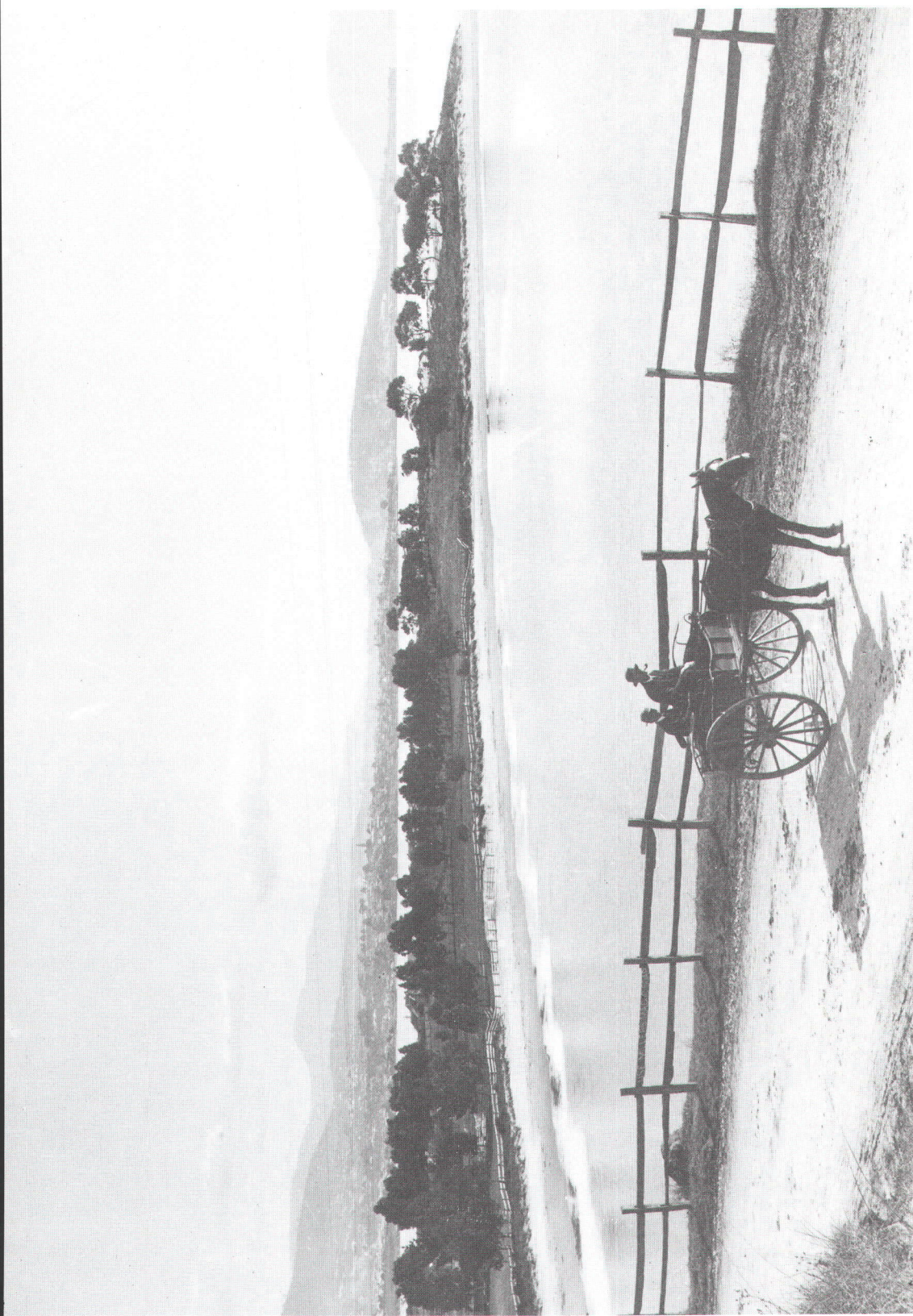




British troops passing through Elizabeth Street, Hobart, C. 1900

[Beattie's Studio, copyright]

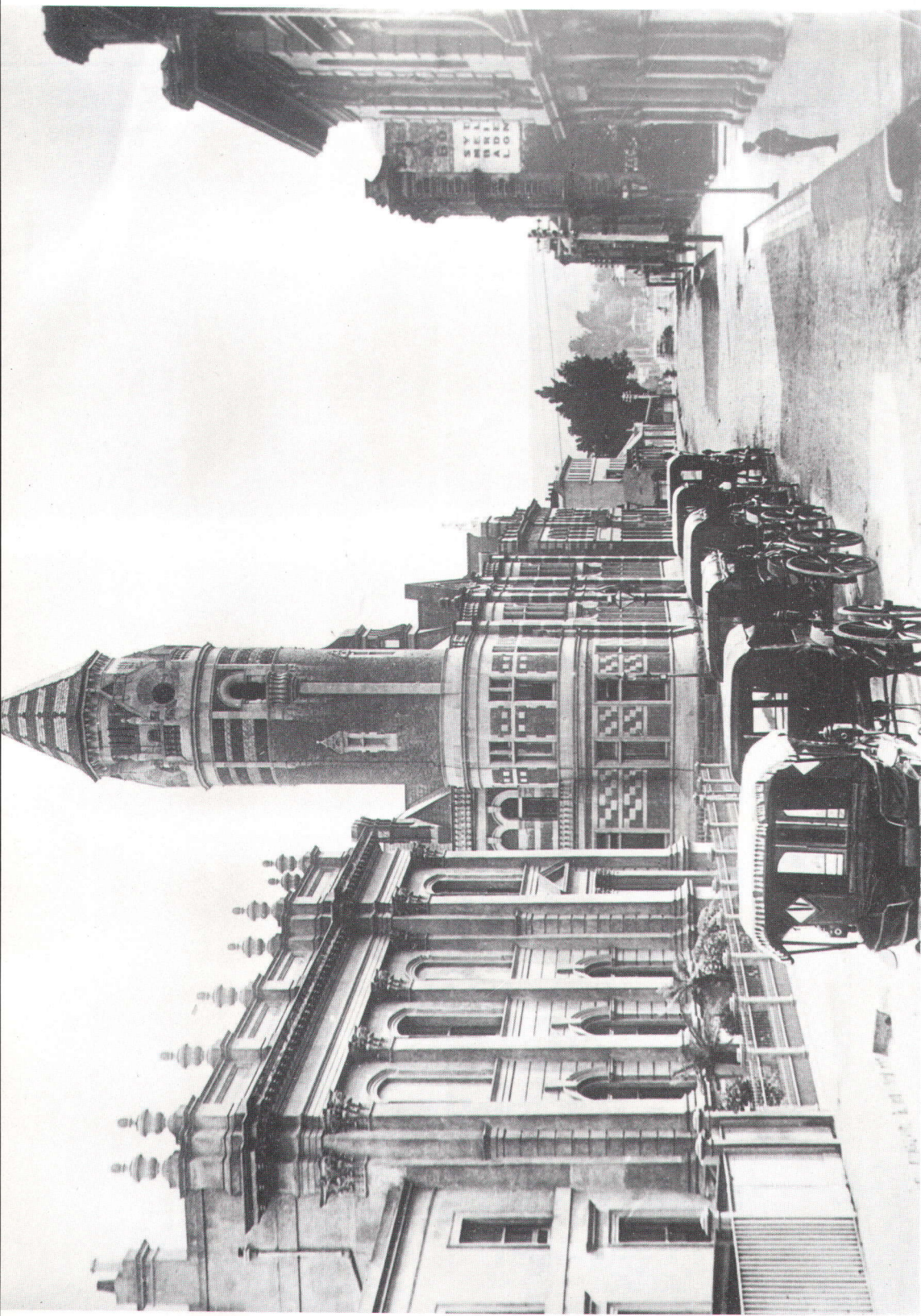




Early photograph of Long Beach, Sandy Bay

[Beattie's Studio, copyright]





St John Street, Launceston, C. 1890, showing the Post Office (completed in 1886)

[Beattie's Studio, copyright]

**Bush Fires Fought by the Forestry Commission, Tasmania**  
(Source: Forestry Commission)

Year	Fires reported	Area burnt				Cost of suppression
		State forest	Other Crown land	Private property (a)	Total (a)	
	no.	hectares	hectares	hectares	hectares	\$
1973-74 .....	62	2 147	3 727	180	6 054	23 688
1974-75 .....	48	805	412	1 083	2 300	18 205
1975-76 .....	88	5 812	13 097	1 040	19 949	69 512
1976-77 .....	59	2 701	141	669	3 511	40 191
1977-78 .....	199	17 580	6 369	n.a.	23 949	209 553
1978-79 .....	90	2 602	1 333	419	4 354	63 608

(a) Includes only those fires on private property fought to protect adjoining State forest or timbered Crown land.

Total expenditure by the Commission during 1978-79 was \$16.7m. This expenditure was funded from Loan Funds, Consolidated Revenue, funds provided under the *Softwoods Forestry Agreement Act 1976* and monies made available for unemployment relief. Money collected each year (mainly from timber royalties) is paid into Consolidated Revenue and, by law, becomes a grant to the Commission the following year.

The main revenue of the Forestry Commission is derived from royalties, i.e. charges paid by those taking timber from Crown lands. By law, such revenue is specifically reserved for expenditure on forestry. The next table has been compiled to show the revenue and expenditure of the Commission for the last six years; expenditure exceeds revenue since money from State loan funds devoted to forestry purposes is included in expenditure.

**Forestry Commission: Revenue and Expenditure, Tasmania**  
((\$'000))

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
REVENUE						
Royalties .....	3 141	3 724	4 001	5 088	5 317	5 778
Sale of forest products .....	66	86	103	150	165	123
Other .....	52	55	55	75	133	146
Total .....	3 259	3 865	4 159	5 313	5 615	6 047
EXPENDITURE (a)						
Administration—						
Revenue collection .....	422	584	603	752	854	1 116
Forest management .....	850	1 193	1 362	1 510	1 804	1 936
General .....	725	1 057	1 261	1 543	1 680	1 644
Forest works—						
Road construction .....	1 157	1 348	2 006	2 589	3 034	2 820
Building and other .....	199	168	497	643	769	840
Afforestation and reafforestation .....	1 917	2 633	3 582	4 409	5 106	4 760
Forest protection (n.e.i.) .....	198	230	357	374	499	513
Mapping and surveys .....	220	377	549	639	731	792
Land purchases .....	8	2	17	104	92	244
Purchases, plant and equipment .....	37	83	368	811	810	387
Interest on advances .....	550	654	828	1 016	1 178	1 332
Purchases of Huon pine logs .....	—	—	—	—	—	306
Total .....	6 283	8 329	11 430	14 389	16 557	16 690

(a) Aggregate expenditure from all sources, i.e. Consolidated Revenue, Loan and Trust Funds.



### Federal Government-State Agreement

The Federal *Softwoods Forestry Agreement Act* 1967 was passed with the specific intention of increasing the rate of softwood-plantings in Australia by providing Federal financial assistance to the states. Under the Act each state was allocated: (i) a *base year* area of softwood plantings which was financed by the state; and (ii) a *scheduled* area in excess of the base year figure, the excess financed by special Federal Government loans. The base year area was constant for each year of the five-year program which commenced in 1966-67.

In late 1972 Federal legislation was passed which extended the Federal Government-State softwood forestry agreement for a further five years. The legislation was made retrospective from July 1971. Financial terms were similar to those set out in the 1967 agreement. The *Softwoods Forestry Agreement Act* 1976 extended the agreement, but with reduced planting rates, for an additional year from 1 July 1977. In 1978, the financial agreement was renewed for five years from 1 July 1977. The Commonwealth was to contribute to the tending of those plantations which had been established under the agreement during the 11-year period from 1966-67 to 1976-77.

## FORESTRY ON THE TASMAN PENINSULA

(This article was contributed by the Forestry Commission)

### Introduction

Approximately 41 per cent of Tasmania's land surface is covered by forest. This contrasts with the mainland where there is a coverage of only about six per cent.

Of Tasmania's forested area, nearly half is State Forest, the rest is open Crown Land, private land or reserves such as national parks. The Forestry Commission is responsible for the management of all State Forests and aims to manage these in perpetuity, so that there will always be a forest resource for wood based products, as well as maintaining environmental values and actively encouraging the public use of forests for recreation and other activities.

All the State Forest on the Tasman Peninsula is within the A.P.M. (Australian Paper Manufacturers) concession area. The *Forestry Act* 1954 provided for the setting up of a pulpwood industry and in 1960 a special licence was issued, giving A.P.M. the rights to obtain pulpwood from the Southern forests, which include the Tasman Peninsula, for an 80-year period.

Although the area of State forest on the Tasman Peninsula is relatively small, it provides a good example of Forestry Commission management of State Forests within Tasmania.

### Forest Estate

The forests on the Tasman Peninsula are mainly regrowth forests, which have resulted from fires following old logging. The age of most of the regrowth is between 30 and 75 years.

The main eucalypt species are Stringybark (*Eucalyptus obliqua*) and Swamp gum (*E. regnans*). Smaller proportions of Blue Gum (*E. globulus*) and Gum topped stringybark (*E. delegatensis*) also occur, the former mainly as regrowth and the latter at higher altitudes.

### Forest History

Sawmilling commenced on the Tasman Peninsula during the mid-19th century. Trees were felled and transported via a network of tramways to the various small sawmills in the area. Traces of these old tramways can still be observed today.

During the 1920s an expanding apple industry created a demand for fruit cases. This period was the virtual 'hey-day' of forest industry on the Peninsula. At its peak more than 200 men were employed in the logging and sawmilling industries. Major sawmills were located at Taranna and Fortescue Bay. Fortescue Bay was a main port for interstate and overseas trade with Blue gum being sought eagerly in Europe for wharf piles, because of the timber's resistance to rot in sea water.

The decline in sawmilling in the area began in the mid 1930s when men at the Taranna mill of H. Jones and Co. demanded higher wages. The Company closed the mill when the men went on strike. The smaller mills in the area gradually closed over the ensuing years.

Between 1936 and 1940 the then Forestry Department set up a camp for unemployed youths at Taranna. The youths were involved in general forestry work, and were accommodated in weatherboard huts and tents. Some problems must have been encountered

in 1937 as most of the boys at Taranna were involved in a strike which reduced the number of trainees from 24 to nine. During this era, the youths were chiefly engaged on cutting permanent access tracks and in thinning stands of regrowth eucalypt.

Fully integrated logging operations (i.e. simultaneous logging on both sawlogs and pulpwood) commenced on the Peninsula in 1977, with the clearfelling of coupe T6a.

### Current Forest Land Use

#### *Forest Management—General*

The *Forestry Act 1954* required forest management to be implemented under a formal working plan. This provided for the preparation of five-year plans of operations, which were to prescribe areas to be harvested for sawlogs and pulpwood.

For ease of administration, the A.P.M. concession area is divided into seven future working circles, each of which consists of a number of forest blocks. Forest blocks are further sub-divided into compartments and coupes. Compartments form permanent administrative units and coupes are areas which are clearfelled or thinned as a unit. The boundaries of compartments and coupes conform to natural topographic features, i.e. valleys, streams or ridges selected to provide the best burning and protective boundaries.

The boundaries of clearfelling coupes are marked on the ground by forestry staff and with integrated logging coupes are felled in one operation. The area is then burnt to provide optimum conditions for seed sowing. Extensive research has confirmed the hot regeneration burn, after logging, to be the best technique available for regenerating the eucalypt, particularly in wet sclerophyll forests. This closely simulates the conditions under which the eucalypt has evolved over the centuries. Burning is usually carried out in late summer or early autumn.

Wherever possible, the area is then sown, from the air, with seed of the same species as the original crop. Sowing is carried out as soon as practicable after the burn to ensure the maximum number of Autumn germinations.

The resulting regeneration is appraised the following year by means of regeneration surveys. These surveys identify any unregenerated areas which may require resowing or planting and also monitor damage by browsing animals.

#### *Forest Management—Tasman Peninsula*

*Forest Utilisation:* There are two forest blocks on the Tasman Peninsula—the Tasman and Koonya blocks. Forest operations at present are taking place only on the Tasman block. Within this block there are 23 compartments, five clearfelling coupes and eight thinning coupes. Clearfelling coupes average 50-150 ha in area, and thinning coupes are usually 8-20 ha.

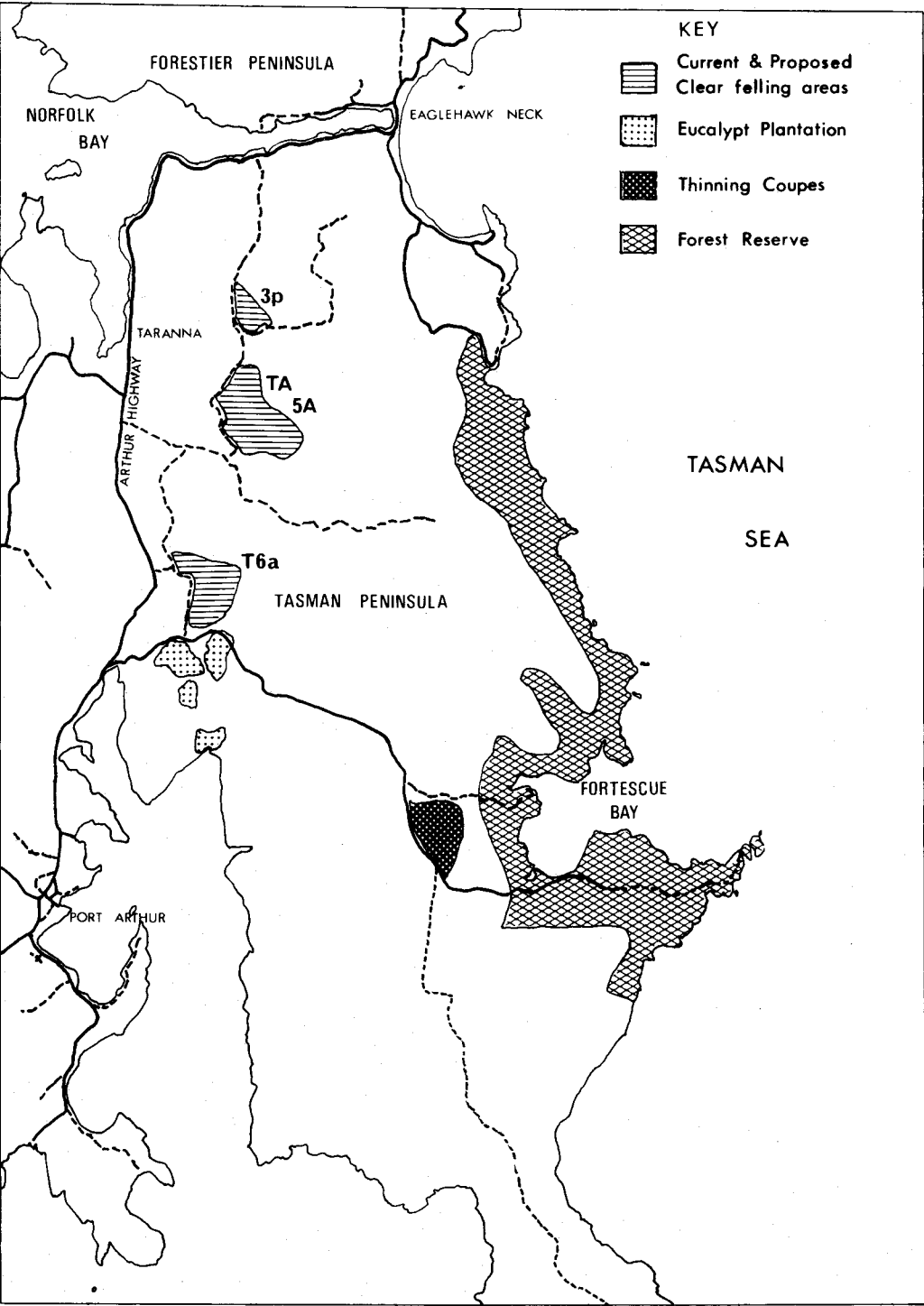
There is currently only one clearfelling coupe being logged on the Peninsula. Integrated logging commenced on this coupe in 1977. With integrated logging, timber is classified at the log landing for its most suitable use, either as sawlogs or as pulpwood. Pulpwood is transported by truck to A.P.M.'s Geeveston pulpmill and the sawlog material is at present taken to Crisp and Gunn's sawmill at Mornington.

Pulpwood is obtained from the thinning coupes.

*Roading:* The Forestry Commission is responsible for road construction in the State Forests of the Tasman Peninsula. Planning of road development is an integral part of the five-year plan, providing access for timber utilisation and protection of the forest estate.

*Fire Protection:* The Commission is also responsible for fire protection and has developed a system of aerial and lookout tower fire spotting, along with a network of fire trails, to facilitate rapid fire suppression and control. The *Fire Service Act 1979*, also provides for the proclamation of extreme fire hazard areas.

*Eucalypt Plantation:* Approximately 80 ha of eucalypt plantation has been established on derelict farmlands. Seedlings were raised at Taranna and planted between 1968 and 1972. The resulting regrowth is clearly evident along the Fortescue Bay Road.



*Employment:* The Forestry Commission employs one forest ranger and three A.W.U. award employees on the Tasman Peninsula. Privately employed bush workers are also involved in felling operations.

### **Recreation and Landscape Management**

#### *Landscape*

The Forestry Commission appreciates that the Tasman Peninsula is an area of national importance with major scenic and historic features. This is considered in management planning for the area, and, wherever possible, the Commission aims to minimise the visual impact of forest operations.

The Commission funded the joint appointment of a landscape architect working towards a broad statewide landscaping policy covering State Forest areas and operations.

#### *Recreation*

The Forestry Commission sees itself as a total land manager, and is well aware of the many 'non-wood' values of forests, such as recreation and conservation. Since 1975, there has been an active policy of forest reservation. Seventeen Forest Reserves are currently proclaimed throughout the State. These are inviolate from timber sales and many are being developed for public recreation and enjoyment.

There is a major Forest Reserve on the Tasman Peninsula. The reserve of 1 470 ha extends from Waterfall Bay to Fortescue Bay, protecting the significant environs of the coastal walking track. Fortescue Bay is one of the major camping venues on the Peninsula. The Forestry Commission will be carefully planning site development in this area.

### **Summary**

The forests of the Tasman Peninsula are a valuable resource. Careful management is essential to ensure a continuing supply of raw material to industry while making adequate provision for recreation and conservation. Forest utilisation is on a very small scale and is planned not to adversely affect the tourist potential of the area. The Forestry Commission believes that forestry operations and tourism can co-exist, if not complement one another, on the Tasman Peninsula.

## **MINING**

### **Introduction**

For statistical purposes, mining is taken to cover the operations normally thought of as mining and quarrying (i.e. the removal from underground or surface workings of ores, etc.), the recovery of minerals from ore dumps, tailings, etc. and ore dressing (i.e. concentration and other elementary treatment). It does not include the smelting and/or refining of metallic minerals or the processing of non-metallic minerals (e.g. limestone into cement); these operations are classified as manufacturing.

In the present Tasmanian economy, two important metals will serve to illustrate the distinction between mining and manufacturing: aluminium, produced at Bell Bay on the Tamar; and zinc produced at Risdon near Hobart. In terms of the previous definition, the two metals are considered to be the output of manufacturing and only a small part of their total value is attributable to the mining industry in Tasmania. In the case of aluminium, no Tasmanian ores or concentrates are used and no value accrues to the Tasmanian mining industry. A substantial part of the value of the aluminium is, in fact, accounted for by imported materials. Zinc is produced from both imported and locally-produced concentrates, but only the value of the local concentrates produced at Rosebery is included as contributing to the total value of the Tasmanian mining industry. Prior to the 1977-78 Census of Mining Establishments, the 1969 preliminary edition of ASIC was used to provide a definition of the mining industry. As from 1977-78, the definition of the mining industry has been changed to that specified in the 1978 edition of the ASIC (Cat. No. 1201.0) which treats iron ore pelletising as part of the mining industry and not as part of manufacturing industry.



### Historical

Tasmania's first mine opened at Port Arthur in 1834. In that year, it produced 61 tonnes of coal but closed just 10 years later due to the poor quality of the coal and other discoveries elsewhere. Major mineral discoveries were not made until later in the nineteenth century—tin oxide was first discovered near Mt Bischoff in 1871, silver-lead ore was discovered in the Zeehan-Dundas area in 1882 and the 'Iron Blow' copper ore outcrop near Mt Lyell was discovered in 1883. These and later discoveries led to the establishment of mining operations which have had a significant impact on Tasmania's growth. A more detailed historical background to the development of mining in the State is included in the 1976 and earlier editions of the *Year Book* and a 'West Coast Mining Chronology' is included in the 1968 edition.

### Importance of Mining to the State

Mining activity in Tasmania has been subject to frequent and severe fluctuations, mainly as a result of changes in supply and demand. Nevertheless, mining forms an important sector of the Tasmanian economy. The next table lists the major mineral products produced in Tasmania, the locations of the main mines, the assayed content of ores mined during 1978-79 and the assayed content of Tasmanian ores mined as a percentage of total Australian production.

Major Mineral Products: Tasmania-Australia Comparison, 1978-79

Mineral product	Location of main mine(s)	Unit	Assayed content of ores mined		Per cent (a)
			Tasmania	Australia	
Coal (black) .....	Fingal Valley	tonnes	(b) 252 800	(b) 81 197 000	0.3
Copper .....	Mt Lyell	tonnes	24 471	238 688	10.3
Gold .....	Mt Lyell, Rosebery	kg	1 764	19 584	9.0
Iron .....	Savage River	tonnes	1 569 946	53 248 000	2.9
Lead .....	Rosebery, Williamsford	tonnes	21 172	423 492	5.0
Silver .....	Rosebery, Williamsford	kg	80 917	874 075	9.3
Sulphur .....	Mt Lyell, Rosebery	tonnes	106 811	398 616	26.8
Tin .....	Renison Bell	tonnes	6 960	12 011	57.9
Tungstic oxide .....	Grassy (King Island)	tonnes	2 419	3 558	68.0
Zinc (c) .....	Rosebery	tonnes	73 074	498 484	14.7

(a) Tasmanian production as a proportion of Australian production. (At 30 June 1979, Tasmania's population was 2.9 per cent of the total population of Australia.)

(b) Actual production.

(c) Tasmania accounted for approximately 66 per cent of Australia's total refined zinc production in 1978-79. Both local and interstate concentrates are refined in the State.

The accompanying map shows the locations of major operative mines. No indication of relative size is given as the scale of operations varies greatly between mines.

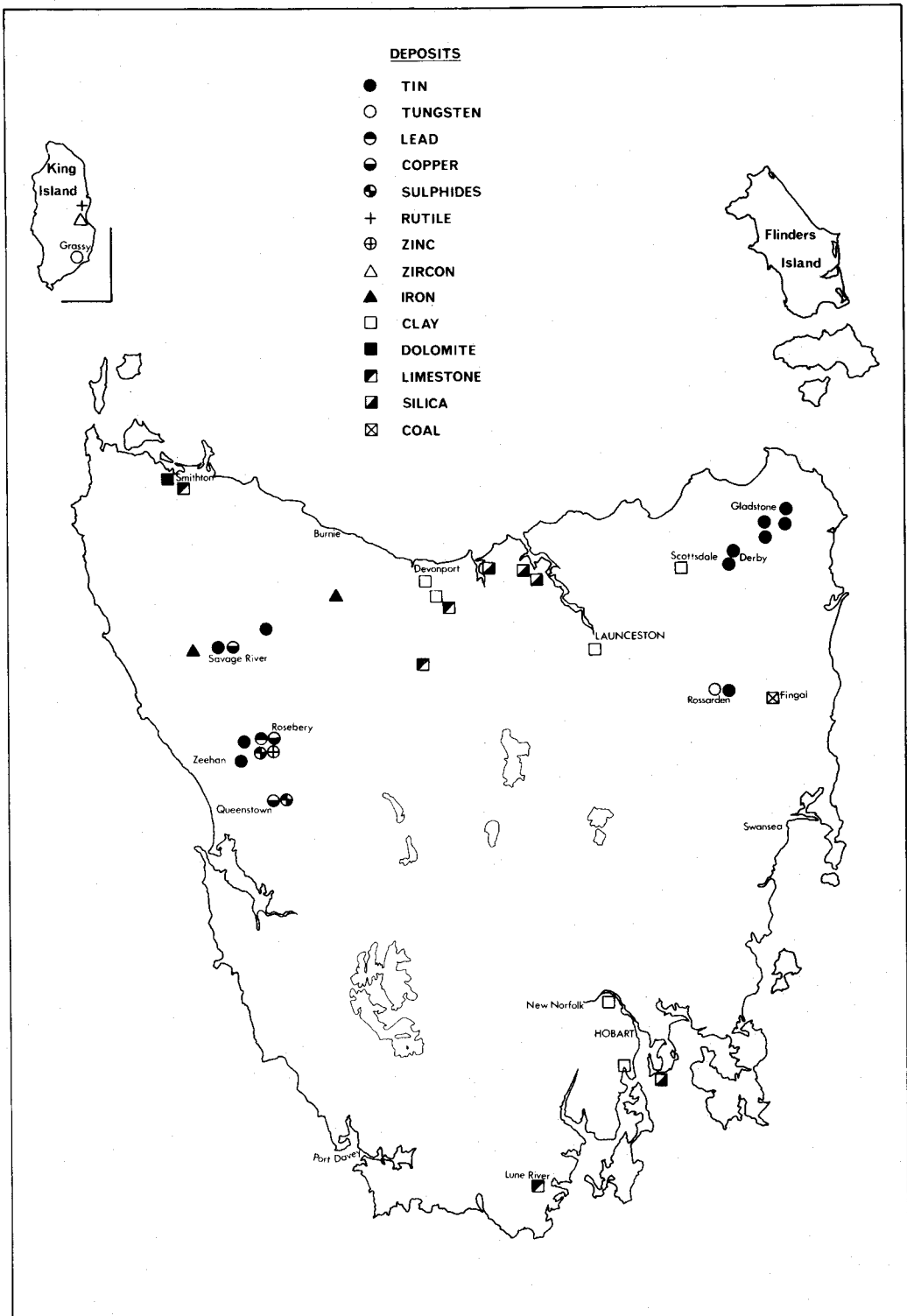
### Major Mining Companies

Normally, the Bureau does not publish information relating to any single enterprise or establishment but only publishes statistical aggregates where these do not directly or indirectly reveal the operations of any single informant. However, inclusion of some description of some of the major mining companies operating in Tasmania is most desirable; therefore, the State Department of Mines has prepared the following brief summaries and accepts responsibility for the information given. (The operations of The Electrolytic Zinc Company of A/asia Ltd (Risdon and Rosebery) and Comalco Aluminium (Bell Bay) Ltd, together with other major Tasmanian manufacturing companies, are summarised in the section 'Industrial Development' which appears in Chapter 9.)

**King Island Scheelite (King Island):** A member of the Peko-Wallsend Limited group of companies, this Company mines and processes scheelite ore to the concentrate stage from its two underground mines, Bold Head and Dolphin. Completion of a recent \$4 million development project has enabled the Company to produce an artificial scheelite. The 1980 *Year Book* includes an article on this Company (pp.217-223).

**Mt Lyell Mining and Railway Co. Ltd (Queenstown):** This Company, which commenced operations in 1897, is producing copper in the form of concentrates at the rate of about 18 000

**Location of Principal Mineral Deposits, Tasmania**  
**Metallic, Non-Metallic and Fuel Minerals**



tonnes of contained copper per year from 1 600 000 tonnes of ore. The ore is won by underground methods. Due to improved metal prices the Company was able to repay the subsidy of \$2.4 million provided by the Commonwealth Government in 1977-78. An agreement was also entered into with the Tasmanian Government whereby a subsidy of \$604 000 was converted to an interest free loan which is not repayable until 30 June 1985. The Company is at present establishing a major diesel trucking operation in the main decline. Substantial progress has also been made on the installation of two new large ball mills which will replace eleven small mills. (The 1978 *Year Book* includes a special article titled 'Problems for the Mt Lyell Mining and Railway Co. Ltd', pp. 247-249.)

*Renison Ltd (Rosebery)*: The present mining and concentrating plant was commissioned in December 1966. It has grown out of early mining operations to become the largest tin mine in Australia. It has the further distinction of being the world's largest producer of tin metal in concentrates from a hard rock underground mining operation. A concentrate leach plant was completed in August 1977. This plant treats both high grade gravity and low grade flotation concentrates by sulphuric acid leach to produce a single product containing about 50 per cent tin. Smelting trials were conducted in Japan in 1977 with a view to establishing an electric tin smelter in Tasmania to treat tin concentrates from the leach plant. Current production rates are of the order of 11 000 tonnes of tin concentrate, containing 5 500 tonnes of tin, from 600 000 tonnes of ore. A two stage development program now under way will increase capacity for ore treatment to 850 000 tonnes per annum. At the end of 1979, Stage 1 of the concentrator was progressing well. Detailed design of Stage 2 was well advanced and the rod mill foundations were almost completed. (The 1979 *Year Book* includes a special article on the Company, pp. 216-223.)

*Savage River Mines (Pickands Mather and Co. International Managing Agent) (Savage River)*: Established at a cost of \$80m, the Port Latta iron ore pelletising plant commenced operations in 1968. Annual production was increased during 1971 to more than 2.5m tonnes of high-grade iron ore pellets. The entire production is sold to Japanese steel mills. In future it is hoped to develop a new open cut mine which will be operated concurrently with the present mine.

### Statistics of Mineral Production

#### Source of Data

Statistics relating to quantities of minerals produced (including assayed metallic content) are, in the main, obtained from the State Department of Mines and are supplemented, where necessary, with data obtained from the annual census of mines and quarries conducted by the Australian Bureau of Statistics, and from the Federal Bureau of Mineral Resources.

Other details of the mining industry such as employment, value of output, and costs of production, etc. are obtained from the annual census of mines and quarries, conducted by the Bureau. This census was first conducted in 1952 and the information obtained from each census was basically the same until 1968. As from 1968-69 the mining sector census was standardised in accordance with the concepts employed in the integrated economic censuses (see 'Integrated Economic Censuses' in Chapter 18 for a comparison between mining and other industries included in the integrated censuses).

Tasmania's larger mining operations, in particular metal mining, are located in the west of the State and are concentrated in an area from Queenstown to Savage River. A number of tin mines operate in the north-east of Tasmania but their combined output no longer compares with either former activity in that area or current operations in the west.

#### Metallic Minerals

The table that follows shows the quantity of metallic minerals produced in Tasmania for a six-year period:

## Metallic Minerals: Production, Tasmania

Mineral	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
TONNES						
Chromite concentrate .....	—	—	—	—	301	1 285
Copper concentrate .....	96 015	101 672	83 255	70 237	70 668	77 039
Copper-tin concentrate .....	3 124	2 506	2 896	2 610	1 806	1 980
Iron—Concentrate .....	2 304 575	2 051 783	2 109 363	2 315 196	1 869 607	2 271 990
Oxide .....	12 879	10 989	9 831	14 700	13 793	15 525
Lead concentrate .....	16 937	12 457	13 341	13 785	17 710	18 226
Lead-copper concentrate .....	19 919	19 952	19 480	25 709	27 760	24 719
Pyrite concentrate .....	238 850	218 474	212 931	227 242	252 469	110 942
Rutile concentrate .....	3 237	4 844	6 994	3 886	—	—
Tin concentrate .....	12 496	12 597	12 889	15 035	14 677	14 127
Tungsten concentrates—						
Scheelite concentrate .....	1 630	1 672	2 360	3 180	3 391	3 123
Wolfram concentrate .....	180	310	274	215	174	193
Zinc concentrate .....	127 352	108 793	123 944	126 271	142 568	131 096
Zircon concentrate .....	3 072	7 560	7 953	3 722	—	—
KILOGRAMS						
Gold (not in concentrates) .....	2	2	1	1	1	1

**Assayed Content:** In the following table, the various concentrates have been grouped to show their content in terms of individual metals. The contents stated are as determined by assay and include all pay metals and metals which are a refiner's prize; totals compiled on this basis contain no allowances for losses in smelting and refining and therefore, in general, exceed the quantities actually recoverable. The table refers exclusively to minerals mined in Tasmania.

## Assayed Contents of Metallic Minerals Produced, Tasmania

Mineral	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
CHROMIC OXIDE (Cr <sub>2</sub> O <sub>3</sub> ) (TONNES)						
Chromite concentrate .....	—	—	—	—	168	603
COPPER (TONNES)						
Copper concentrate .....	24 292	25 824	21 298	18 444	18 548	20 174
Copper-tin concentrate .....	652	522	628	535	390	457
Lead concentrate .....	67	31	63	60	89	90
Lead-copper concentrate .....	2 350	2 652	2 656	3 328	3 599	3 343
Zinc concentrate .....	465	351	416	443	398	407
Total .....	27 826	29 380	25 061	22 809	23 024	24 471
GOLD (KILOGRAMS)						
Copper concentrate .....	470	508	434	367	400	460
Lead concentrate .....	82	30	30	27	39	61
Lead-copper concentrate .....	972	913	986	1 133	1 327	1 038
Zinc concentrate .....	166	116	148	164	167	204
Other sources .....	2	2	1	1	1	1
Total .....	1 692	1 569	1 598	1 691	1 934	1 763
IRON (TONNES)						
Iron concentrate .....	1 599 592	1 426 352	1 463 044	1 601 011	1 291 899	1 569 946
LEAD (TONNES)						
Lead concentrate .....	10 920	8 648	8 919	9 079	11 942	11 726
Lead-copper concentrate .....	5 138	4 207	4 823	6 215	6 882	5 155
Zinc concentrate .....	5 568	5 207	5 800	5 118	4 763	4 291
Total .....	21 626	18 062	19 542	20 412	23 587	21 172

## Assayed Contents of Metallic Minerals Produced, Tasmania—continued

Mineral	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
SILVER (KILOGRAMS)						
Copper concentrate .....	4 418	5 373	3 983	2 973	2 636	2 887
Lead concentrate .....	13 272	9 383	11 005	11 874	15 401	15 903
Lead-copper concentrate .....	53 034	45 211	42 780	49 533	56 430	49 995
Zinc concentrate .....	17 194	13 320	17 745	14 667	12 929	12 133
Total .....	87 918	73 287	75 515	79 047	87 397	80 917
SULPHUR (TONNES)						
Lead concentrate .....	3 118	2 138	2 370	2 507	3 153	3 437
Lead-copper concentrate .....	5 673	6 055	5 527	7 674	8 172	7 558
Pyrite concentrate .....	114 141	103 848	101 156	109 671	114 690	52 986
Zinc concentrate .....	41 820	35 191	40 284	41 125	45 505	42 830
Total .....	164 752	147 232	149 337	160 977	171 520	106 811
ZINC (TONNES)						
Lead concentrate .....	2 247	1 301	1 348	1 560	1 885	2 099
Lead-copper concentrate .....	2 657	2 409	1 942	2 490	2 865	2 546
Zinc concentrate .....	67 057	57 747	64 028	65 917	75 185	68 429
Total .....	71 961	61 457	67 318	69 967	79 935	73 074
TIN (TONNES)						
Copper-tin concentrate .....	81	73	76	72	45	47
Tin concentrate .....	5 957	5 863	5 794	6 760	6 947	6 913
Total .....	6 038	5 936	5 870	6 832	6 992	6 960
TUNGSTIC OXIDE (WO <sub>3</sub> ) (TONNES)						
Scheelite concentrate .....	1 171	1 207	1 670	2 398	2 465	2 280
Wolfram concentrate .....	134	230	206	159	124	139
Total .....	1 305	1 437	1 876	2 557	2 589	2 419
CADMIUM (TONNES)						
Zinc concentrate .....	177	135	172	177	200	177
MANGANESE (TONNES)						
Zinc concentrate .....	423	262	316	342	613	261
TITANIUM OXIDE (TONNES)						
Rutile concentrate .....	3 140	4 643	6 710	3 692	—	—
Zircon concentrate .....	9	23	23	11	—	—
Total .....	3 149	4 666	6 733	3 703	—	—
ZIRCON (TONNES)						
Rutile concentrate .....	26	38	56	30	—	—
Zircon concentrate .....	2 009	4 973	5 259	2 456	—	—
Total .....	2 035	5 011	5 315	2 486	—	—

### Fuel Minerals (Coal)

The only fuel mineral mined in Tasmania is coal. There are known deposits of coal throughout much of Tasmania but the most important are those located in the Fingal Valley in the north-east. The Fingal Valley deposits were discovered in 1866.

In 1890 Tasmania produced 55 000 tonnes of coal and production continued to rise until a peak of over 300 000 tonnes was reached in 1959-60. Since then there has been a marked decline due to competition from fuel oil, particularly in manufacturing industries. Recently the downward trend in production has been reversed with major Tasmanian manufacturers switching back to coal from oil as their fuel for operations. Production details for recent years (in tonnes) are as follows: 1974-75, 137 868; 1975-76, 176 352; 1976-77, 193 927; 1977-78, 195 291 and 1978-79, 252 800 (all production is of black, bituminous coal).

### Non-Metallic (Excluding Fuel) Minerals

The quarrying of limestone is the earliest recorded activity in the field of non-metallic mineral mining in the State, burnt lime being sought as a base for building mortar. Production of this non-metallic mineral has gradually increased to meet a rising demand in various industrial processes. Large exports of limestone were made in the period 1918-1947, when the B.H.P. Co. Ltd operated quarries at Melrose on the North-West Coast.

The next table shows the Tasmanian production of non-metallic minerals for a five-year period:

**Non-Metallic (Excluding Fuel) Minerals Production, Tasmania**  
(Tonnes)

Mineral	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Clays and shales—						
Brick .....	138 770	139 679	156 254	153 306	137 593	136 947
Other .....	99 492	74 496	64 447	49 704	41 684	54 406
Dolomite .....	5 450	6 199	9 259	7 734	11 232	15 018
Limestone (a) .....	658 210	579 812	548 969	667 090	713 589	757 976
Peat moss .....	318	390	535	330	372	345
Ochre .....	62	—	—	—	—	—
Pebbles .....	1 264	976	1 771	1 189	1 566	1 418
Silica (b) .....	31 644	32 178	34 708	47 418	56 640	59 420

(a) Excludes quantities used directly as building or road construction material.

(b) For glass, chemical, etc. manufacturing.

### Construction Materials

In addition to the types of mining and quarrying previously described there is the quarrying of construction materials (for buildings, roads, etc.) such as crushed and broken stone, gravel and sand. This type of activity also is taken into account when placing a value on the output from mines and quarries, measuring their level of employment, etc.

### Census of Mining Establishments

Annual censuses of mines were conducted by the Bureau from 1952; the last 'old-style' mining census covered the calendar year 1968. For 1968-69 simultaneous integrated economic censuses were undertaken in respect of mining and four other sectors (manufacturing; wholesale trade; retail trade; and electricity and gas production and distribution). In the section 'Integrated Economic Censuses' in Chapter 18, the results of these censuses are presented so that the economic significance of mining can be compared with that of other sectors included in the censuses. Definitions of concepts and terms used are also included in that section.

### Mining Establishments—Summary of Operations

The tables that follow give results for the mining censuses from 1973-74 to 1978-79:

**Census of Mining Establishments**  
**Summary of Operations by Industry Sub-division, Tasmania**

Particulars		1973-74	1974-75	1975-76	1976-77	1977-78 (a)	1978-79
<b>METALLIC MINERALS</b>							
Establishments (b) .....	no.	16	16	18	19	16	18
Persons employed (c)—							
Males .....	no.	3 852	3 924	3 723	3 596	3 679	3 735
Females .....	no.	172	211	199	184	177	183
Total .....	no.	4 024	4 135	3 922	3 780	3 856	3 918
Wages and salaries .....	\$'000	29 179	40 993	44 430	48 309	52 759	58 712
Turnover .....	\$'000	138 417	128 489	124 725	174 523	233 950	277 224
Stocks—							
Opening .....	\$'000	12 541	15 108	17 174	22 760	23 881	24 485
Closing .....	\$'000	15 122	17 172	22 762	19 416	24 404	26 271
Purchases, etc. (d) .....	\$'000	59 099	53 984	54 545	61 341	83 442	106 647
Value added .....	\$'000	81 899	76 569	75 768	109 838	151 031	172 363
Rent, leasing expenses .....	\$'000	151	491	997	1 071	1 330	1 464
Fixed capital expenditure (e) ..	\$'000	12 383	18 129	16 937	12 100	16 163	18 687
<b>COAL</b>							
Establishments (f) .....	no.	1	1	1	1	1	1
<b>CONSTRUCTION MATERIALS</b>							
Establishments .....	no.	29	26	26	28	33	32
Persons employed (c)—							
Males .....	no.	181	163	171	180	191	160
Females .....	no.	4	4	7	5	6	14
Total .....	no.	185	167	178	185	197	174
Wages and salaries .....	\$'000	892	1 041	1 392	1 607	2 150	1 834
Turnover .....	\$'000	4 972	4 871	6 851	7 813	10 173	10 522
Stocks—							
Opening .....	\$'000	360	347	419	610	609	525
Closing .....	\$'000	378	419	519	524	745	1 174
Purchases, etc. (d) .....	\$'000	2 566	2 553	3 771	3 175	3 849	5 414
Value added .....	\$'000	2 424	2 389	3 181	4 552	6 459	5 757
Rent, leasing expenses .....	\$'000	47	68	246	218	227	171
Fixed capital expenditure (e) ..	\$'000	666	737	953	793	3 896	2 308
<b>OTHER NON-METALLIC MINERALS</b>							
Establishments (f) .....	no.	10	13	12	15	14	15
<b>TOTAL MINING</b>							
Establishments (b) .....	no.	56	56	57	63	64	66
Persons employed (c)—							
Males .....	no.	4 139	4 232	4 039	3 939	4 056	4 114
Females .....	no.	178	218	209	194	185	203
Total .....	no.	4 317	4 450	4 248	4 133	4 241	4 317
Wages and salaries .....	\$'000	30 623	43 026	47 197	51 538	57 136	63 122
Turnover .....	\$'000	144 917	135 688	134 446	187 581	251 117	296 465
Stocks—							
Opening .....	\$'000	12 966	15 526	18 020	23 483	24 671	25 459
Closing .....	\$'000	15 570	18 017	23 394	20 086	25 397	28 091
Purchases, etc. (d) .....	\$'000	62 200	57 276	59 213	65 565	89 338	115 135
Value added .....	\$'000	85 321	80 903	80 607	118 619	162 505	183 963
Rent, leasing expenses .....	\$'000	235	643	1 351	1 452	1 762	1 937
Fixed capital expenditure (e) ..	\$'000	13 159	19 430	17 972	13 102	20 437	21 689

(a) Based on the 1978 edition of ASIC. Data for earlier years are based on the 1969 ASIC (preliminary). The main change from the 1969 to the 1978 ASIC was the transfer of iron-ore pelletising plants from the 'manufacturing' industry division to 'mining'.

(b) Excludes small tin producing establishments with a value of sales of less than \$20 000.

(c) At last pay-period in June; includes working proprietors.

(d) Purchases, transfers in and selected expenses.

(e) Outlay on fixed tangible assets less disposals.

(f) Other data not available for separate publication but included in 'Total Mining'.

### Mineral Exploration (Other than for Petroleum)

The statistics in the following tables relating to exploration for minerals other than petroleum are derived from the annual census of mineral exploration.

'Mineral exploration' consists of the search for mineral deposits, the appraisal of newly-found deposits, and the further appraisal of known deposits (included those being worked) by geological, geophysical, geochemical and other methods (included drilling). Exploration for water is excluded. The construction of shafts and adits primarily for exploration purposes is included.

The data obtained in the mineral exploration census are divided into the following categories:

**Exploration on Production Leases:** Relates to exploration carried out on a production lease currently producing, or under development for production of, minerals other than petroleum. Mines included in this section of the mineral exploration census correspond closely to those in the annual census of mining and quarrying with the exception of a limited number of itinerant prospectors and small mines excluded from the collection.

**Exploration on Other Areas:** Relates to: (i) exploration carried out on areas covered by exploration licences issued by the Department of Mines for minerals other than petroleum; and (ii) exploration by private enterprise for minerals which is not directly connected with areas under lease or licence, including general surveys, aerial surveys, report writing, map preparation and other off-site activities not directly attributable to particular lease or licence areas.

The following table shows expenditure details relating to mineral exploration (other than for petroleum) in Tasmania for recent years:

**Mineral Exploration Other Than for Petroleum: Expenditure, Tasmania**  
(\$'000)

Year	Wages and salaries paid	Stores, materials, fuels, etc. purchased	Payments to contractors (a)	Other current expenditure (b)	Net capital expenditure (c)	Total
PRIVATE EXPLORATION ON PRODUCTION LEASES						
1973-74 .....	461	168	452	95	24	1 200
1974-75 .....	596	143	859	79	63	1 740
1975-76 .....	363	86	501	60	21	1 031
1976-77 .....	338	131	712	274	22	1 477
1977-78 .....	303	187	965	218	57	1 730
1978-79 .....	435	168	1 499	198	30	2 330
OTHER PRIVATE EXPLORATION						
1973-74 .....	899	317	1 180	548	49	2 994
1974-75 .....	1 129	397	1 660	517	121	3 824
1975-76 .....	850	347	1 188	637	70	3 092
1976-77 .....	811	325	1 024	598	79	2 838
1977-78 .....	1 345	566	2 387	1 073	311	5 681
1978-79 .....	1 610	559	2 936	1 732	145	6 983
TOTAL PRIVATE EXPLORATION						
1973-74 .....	1 360	485	1 632	643	74	4 194
1974-75 .....	1 725	540	2 519	596	184	5 565
1975-76 .....	1 213	433	1 690	696	92	4 124
1976-77 .....	1 149	456	1 736	872	102	4 315
1977-78 .....	1 648	753	3 352	1 291	367	7 411
1978-79 .....	2 045	727	4 436	1 929	175	9 313
TOTAL GOVERNMENT EXPLORATION (d)						
1973-74 .....	197	17	3	28	2	246
1974-75 .....	318	62	2	39	13	435
1975-76 .....	366	50	—	77	31	523
1976-77 .....	455	50	—	50	21	576
1977-78 .....	502	52	—	58	14	626
1978-79 .....	544	65	—	65	44	717



**Mineral Exploration Other Than for Petroleum: Expenditure, Tasmania—continued**  
(\$'000)

Year	Wages and salaries paid	Stores, materials, fuels, etc. purchased	Payments to contractors (a)	Other current expenditure (b)	Net capital expenditure (c)	Total
<b>TOTAL PRIVATE AND GOVERNMENT EXPLORATION</b>						
1973-74 .....	1 557	502	1 635	671	76	4 440
1974-75 .....	2 043	602	2 522	635	199	6 000
1975-76 .....	1 579	483	1 690	773	122	4 647
1976-77 .....	1 604	506	1 736	922	123	4 891
1977-78 .....	2 150	805	3 352	1 349	381	8 037
1978-79 .....	2 589	792	4 436	1 994	219	10 030

- (a) Amounts paid to contractors, geological consultants, etc., employed to carry out exploration activities.  
 (b) Other current exploration expenditure such as maintenance expenses, map preparation, aerial surveys, and rent and fees paid to governments for mineral tenements.  
 (c) Net capital expenditure is defined as expenditure on fixed tangible assets less disposals.  
 (d) Exploration by Tasmanian Department of Mines.

The next table shows the total drill hole depths drilled, sunk or driven in mineral exploration (other than for petroleum) in recent years:

**Mineral Exploration Other Than for Petroleum: Metres Drilled, Sunk or Driven, Tasmania**

Year	Drilling		
	Core (a)	Non-core (b)	Total
<b>PRIVATE EXPLORATION ON PRODUCTION LEASES</b>			
1973-74 .....	38 087	27 543	65 630
1974-75 .....	44 036	918	44 954
1975-76 .....	16 419	494	16 913
1976-77 .....	19 441	198	19 639
1977-78 .....	25 868	197	26 065
1978-79 .....	32 771	—	32 771
<b>OTHER PRIVATE EXPLORATION</b>			
1973-74 .....	20 848	9 785	30 633
1974-75 .....	26 798	8 674	35 472
1975-76 .....	21 514	6 291	27 805
1976-77 .....	19 005	2 123	21 128
1977-78 .....	25 779	3 645	29 424
1978-79 .....	30 048	3 000	33 048
<b>TOTAL PRIVATE EXPLORATION</b>			
1973-74 .....	58 935	37 328	96 263
1974-75 .....	70 834	9 592	80 426
1975-76 .....	37 933	6 785	44 718
1976-77 .....	38 446	2 321	40 767
1977-78 .....	51 647	3 842	55 489
1978-79 .....	62 819	3 000	65 819
<b>TOTAL GOVERNMENT EXPLORATION (c)</b>			
1973-74 .....	1 519	—	1 519
1974-75 .....	1 627	—	1 627
1975-76 .....	2 572	—	2 572
1976-77 .....	3 835	—	3 835
1977-78 .....	5 134	—	5 134
1978-79 .....	5 607	—	5 607

## Mineral Exploration Other Than for Petroleum: Metres Drilled, Sunk or Driven, Tasmania—continued

Year	Drilling		
	Core (a)	Non-core (b)	Total
TOTAL PRIVATE AND GOVERNMENT EXPLORATION			
1973-74 .....	60 454	37 328	97 782
1974-75 .....	72 461	9 592	82 053
1975-76 .....	40 505	6 785	47 290
1976-77 .....	42 281	2 321	44 602
1977-78 .....	56 781	3 842	60 623
1978-79 .....	68 426	3 000	71 426

(a) Diamond drilling, or any kind of drilling in which cores are taken.

(b) Alluvial, percussion and other drilling in which cores are not taken.

(c) Exploration by Tasmanian Department of Mines.

**ABERFOYLE TIN LTD.**

*(This article was contributed by the Company)*

**Location**

Aberfoyle Tin Ltd. operates the Aberfoyle and Storys Creek tin-wolfram mines at Rossarden and Storys Creek, respectively, in eastern Tasmania. These townships, separated by two kilometres, are situated on the southern slopes of Ben Lomond and lie about 100 km by road from the city of Launceston. The joint population of over 350 is completely dependent on the operations of the two mines.

**History**

Cassiterite was first reported in the district in 1872 from alluvial deposits and veins in the Gipps Creek area—about 8 km west of Storys Creek. In 1882 veins at the Storys Creek mine were being worked for tin on a small scale from adits driven from a tributary of Storys Creek. The first World War stimulated tungsten mining at Storys Creek, and the veins were worked systematically from the adit levels. In 1916 the leases were taken over by the Storys Creek Tin Mining Syndicate and the veins were developed down to level 3 until the mine was closed in 1928. The present company resumed operations at Storys Creek in 1937.

Small veins bearing cassiterite and wolfram were found on the west bank of the Aberfoyle Rivulet in 1916. In 1926 a prospecting syndicate was formed, and in the same year the leases were taken over by Aberfoyle Tin N.L. An adit from the Aberfoyle Rivulet revealed an encouraging series of veins, and production from the Aberfoyle mine began in 1931.

Surface diamond drilling of the Kookaburra-Lutwyche prospect, about 650 metres from the Aberfoyle mine, was carried out in 1961-62. Results of this diamond drilling were encouraging and a drive from the Aberfoyle shaft, level 13, to this prospect was commenced in 1966. Mineralised veins were developed but excessive high pressure water forced the closure of all operations in 1970 pending re-appraisal. In 1977 development was recommenced and current operations are directed towards achieving sufficient information to justify full scale production from the prospect.

**Metal Production**

The estimated total production of the mines to date is as follows:

**Storys Creek Mine:**

Tonnage milled ..... 1.1 million tonnes

Head Grade ..... 0.18% tin (Sn), 1.09% tungstic oxide (WO<sub>3</sub>).

**Aberfoyle Mine:**

Tonnage milled ..... 2.1 million tonnes

Head Grade ..... 0.91% Sn, 0.28% WO<sub>3</sub>.

### **Geology and Reserves**

The orebodies of the Aberfoyle and Storys Creek mines occur in the Mathinna group of shales and quartzites. The country rock in the vicinity of the mines is mostly a highly siliceous, massive, competent sub-greywacke. These sediments have been tightly folded along north-westerly axes, the axes being of near vertical dip and plunging shallowly. A capping of Permian sediments obscures the major veins west of the Aberfoyle Fault at the Aberfoyle mine.

The veins which make up the orebodies of the two mines are fissure fillings, principally of white quartz and with very erratic distribution of the economic minerals—cassiterite and wolframite. In both mines cassiterite is more abundant in the upper levels and wolframite more abundant at depth, probably due to different mobilities of the minerals during injection.

### **Mining**

Miners use air operated hand-held machines and airlegs for development work and various types of narrow vein stoping methods. Approximately 200 tonnes per day of ore is hand or loco trucked to main orepasses where mullock sorting is carried out to upgrade the ore. Vein widths average between 30 cm and 60 cm and stope widths are ideally kept to a working width of 1.2 m Mill delivered head grade averages 0.85 per cent combined metal.

### **Aberfoyle Mine**

Ground conditions are relatively poor at the Aberfoyle mine and hydraulic filling is essential in most stopes. This is mainly due to the proximity of old, completed stopes, fracturing and jointing of the host rock, and the presence of clay-filled faults. Round timber props are used as temporary supports for the hangingwall until tailings of less than 1 590 microns diameter (1 micron = 1 millionth of a metre) are emplaced into the mined cavities. Some shrink and open stoping is carried out when ground conditions permit.

Development to allow new mining blocks to be prepared is underway but the mine appears to be nearing the end of its major life.

### **Storys Creek Mine**

At the Storys Creek mine, the ground conditions are generally very good, owing to the competent nature of the country rock and the shallow depth of the mine. Hydraulic sandfill allowed 100 per cent ore extraction until the Storys Creek mill closed down in 1972. Mining then reverted to open stoping leaving random pillars. Present mining is mainly confined to the extraction of pillars as the mine is fast approaching the end of its working life.

### **Lutwyche Mining**

Since the Aberfoyle and Storys Creek mines are approaching the end of their working lives, exploration and development programs are being carried out in the Lutwyche Prospect. The aim of this work is to prove enough ore reserves to justify the allocation of capital to bring this prospect into operation as a separate mine. The end result will enable the Lutwyche Prospect to be developed as a modern mine, thus removing the restrictions imposed on the old Aberfoyle and Storys Creek mines.

Ground conditions permit shrink stoping to be carried out in the Battery Vein. However, other veins will most likely have to be stoped by the hydraulic cut and fill method. At present, hydraulic fill is unavailable and present stoping of these veins is to be open stoping leaving random pillars.

A rigid diamond drilling program is being carried out. However, the core intersections of the narrow and variable grade veins often necessitate physical development on the vein to prove its grade. If grade, reserves and mining costs can be adequately proved, mining of the Lutwyche Prospect should add 20 years onto life of the mining operation.

### **Ore Treatment**

The ore from both the Aberfoyle and Storys Creek mines is treated at the Aberfoyle mill. Storys Creek has treated its own ore in the past but the mill there was closed down in 1972.





Macquarie Street looking south from St David's Cathedral, C. 1900

*[Beattie's Studio, copyright]*

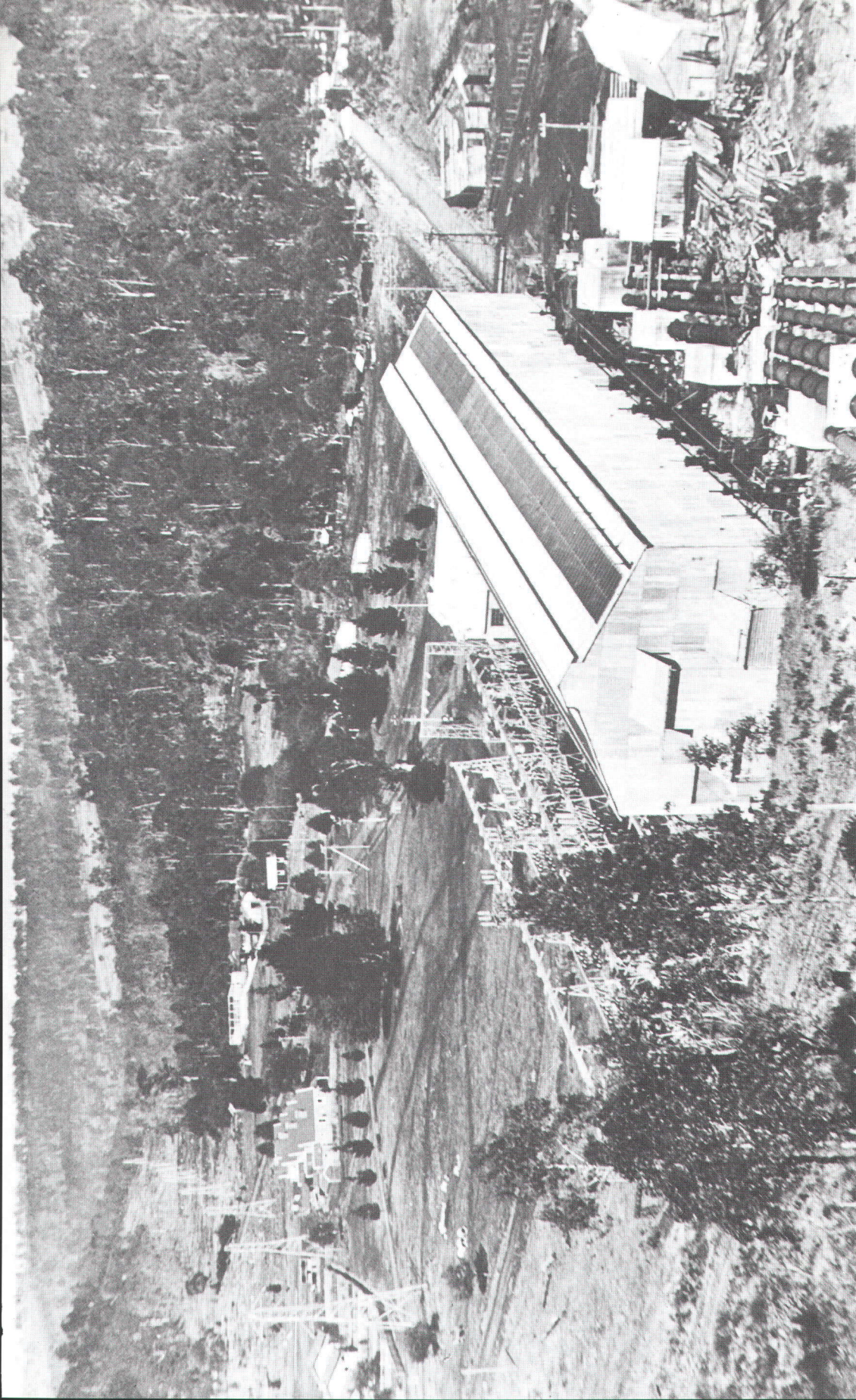




Looking down Liverpool Street, Hobart, from Murray Street, 1893. An early tram can be seen in the distance.

*[Beattie's Studio, copyright]*





Waddamana Power Station, C. 1916

[Beattie's Studio, copyright]



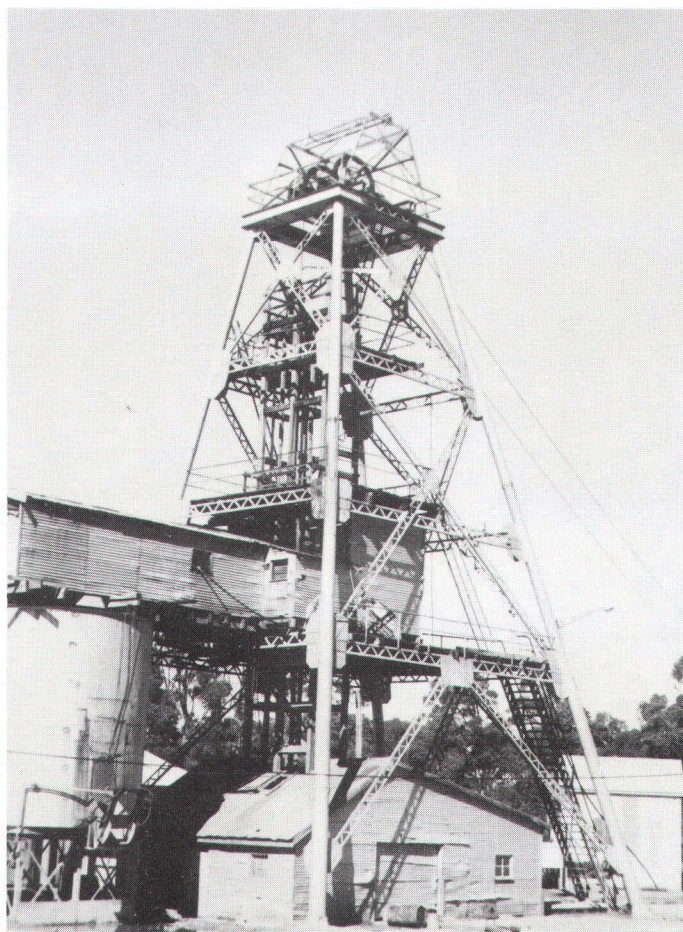


Part of the Oakwood Eucalypt plantation—*Eucalyptus obliqua* (stringy-bark)—off Fortescue Bay Road, Tasman Peninsula



The trading floor, Sydney Futures Exchange (see p. 352)

[Sydney Futures Exchange]



Storeys Creek Mine headframe

[Aberfoyle Tin Ltd]





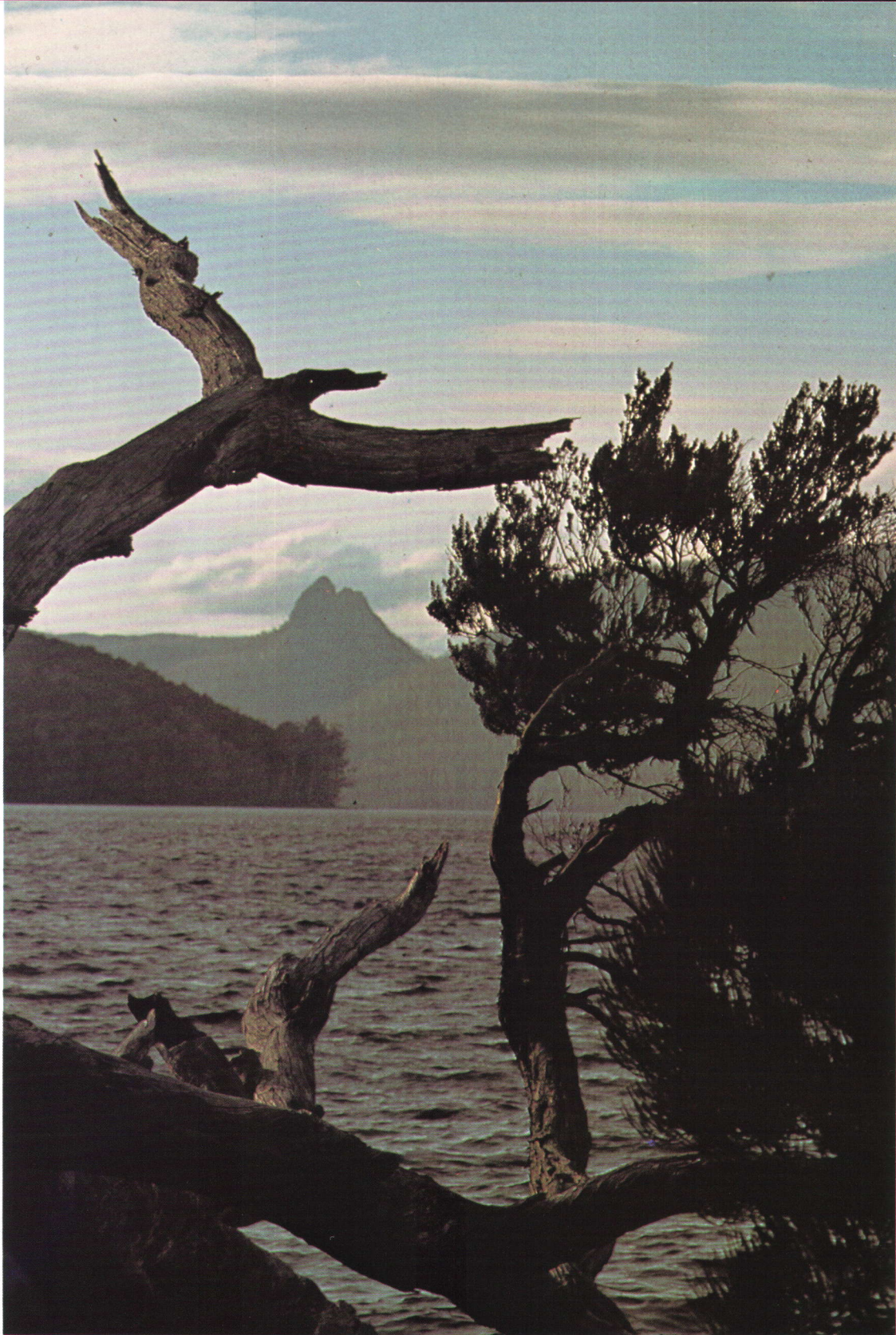
Ore-tipping facilities at the top brace of the Aberfoyle shaft

*[Aberfoyle Tin Ltd]*

Trainee miners learn the basics of underground mining activities at the Training Centre



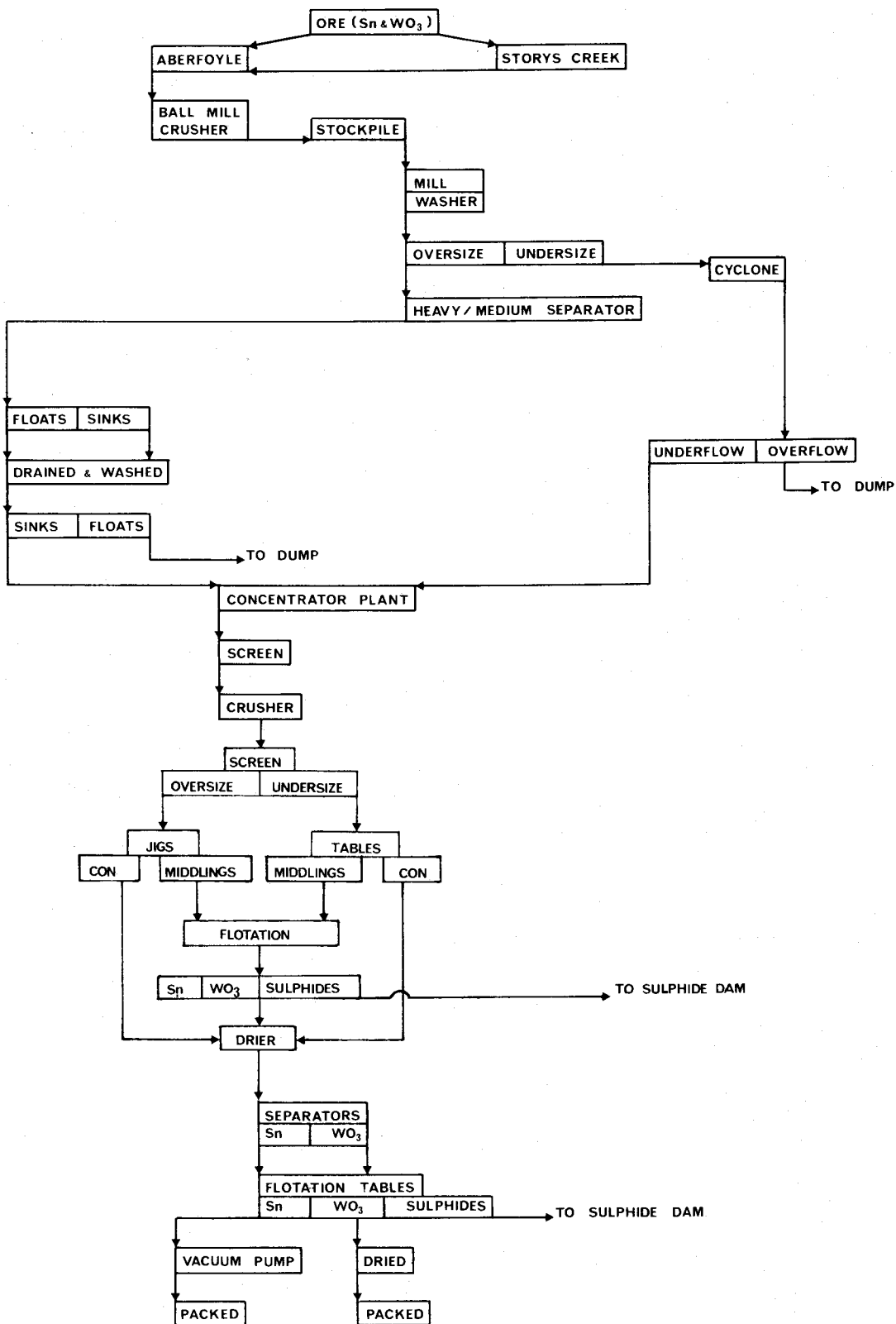




Mt Ida from Lake St Clair

[Edward Gall]

ORE TREATMENT, ABERFOYLE TIN LTD.



The ore has since been transported the 4 km to the Aberfoyle mill by lorry. Since the ore from the two mines is very similar, apart from grade differences, it is possible to treat it using the same plant.

The brace bins at Aberfoyle mine hold up to 110 tonnes of coarse ore, and a steel bin nearby holds up to 70 tonnes of ore from Storys Creek. Conveyor belts take this material to the crushers in the mill, where it is reduced to a minimum of 25 mm diameter and then taken by conveyor to a 450 tonne stockpile.

Fine ore is conveyed back into the mill from the stockpile. It is then washed over a vibrating screen, the oversize portion being fed to a ferrosilicon heavy medium bath using an Akins spiral separator. Both floats and sinks from the heavy medium separation are drained and washed over a vibrating screen. The float material from the heavy medium separator is taken by conveyor belt to the dump, while the undersize from the heavy medium separator preparation screen is cycloned and the underflow from this is fed to the concentrator plant. Sinks from the heavy medium separator go to a 35-tonne bin before continuing to the concentrator plant where it is screened in circuit with a standard Jaques 51 cm (20 inch) cone crusher. The ore is screened to various size fractions which are fed to three sets of Hartz-type jigs.

The vein mineralogy of the Aberfoyle and Storys Creek mines includes a number of sulphide minerals, particularly pyrite, chalcopyrite and marmatite, which would contaminate the cassiterite and wolframite concentrates if not removed. These sulphides are not present in sufficient quantities to be marketable themselves. Two Denver sub-A flotation cells are used to remove some of these. Copper sulphate, M.I.B.C. frother and ethyl xanthate are gravity fed to the conditioner for the flotation cells. Three Wilfley tables are used to treat the concentrates by table flotation. For this process, sulphuric acid, kerosene and amyl xanthate are added to the feed to the flotation tables. Compressed air is released through small holes in a system of pipes above the tables to agitate the material crossing the tables. The sulphide minerals removed are pumped to the sulphide dam near the mill.

The concentrator plant at the mill has five Wilfley sand tables, five slime tables and also a James table. Concentrates from the jigs and tables are collected and then fed into a rotary oil-fired drier. The dry concentrates are reduced to two size fractions; the coarser being then treated with a Rapid separator and the fine concentrates being treated with a Dings cross-belt separator. The separate concentrate fractions are treated by table flotation to remove any sulphides and sand still remaining. Finally, the wolframite concentrates are dried on an oil-fired tray drier, then run through Rapid separators before being packed in steel drums for shipment (12 drums equal 1 tonne of wolframite concentrates).

The tin concentrates are reduced to 5 per cent moisture content with a vacuum pump before being packed in jute bags (gross weight 53 kg each). Wolframite concentrates assay approximately 73 per cent tungstic oxide; cassiterite concentrates assay approximately 75 per cent tin.

### **Jig Tailings**

In 1981 major modifications will be made to the Mill to enable the jig tailings dumps to be retreated and the rate of run-of-mine ore treatment to be doubled.

## **FISHERIES**

### **General**

The Tasmanian saltwater fishing industry involves 1 687 licensed fishermen and crew who operate 760 licensed fishing vessels from the State. The species which comprise the annual catch are not only scale fish but also include elasmobranchs (sharks), molluscs (scallops, oysters, abalone) and crustaceans (southern rock lobster).

In 1978-79 the catch of fish, molluscs and crustaceans totalled 8 290 tonnes which was an increase of 13 per cent on the 1977-78 figure of 7 365 tonnes but still well below the record catch for 1973-74 when 14 828 tonnes were harvested. The high catch for 1973-74 was mainly

due to the establishment of a fish protein factory at Triabunna which ceased operations in mid-1974.

The Fisheries Development Authority controls saltwater fisheries and the Inland Fisheries Commission controls freshwater fisheries. Most freshwater fish are caught for sport but two species (eels and whitebait) have been caught for commercial purposes.

Commercial fishing for whitebait began in 1941 and reached a peak in 1947 when over 450 tonnes were caught. Since 1950 the catch has gradually declined to such a degree that no catch was recorded for the years 1977-78 and 1978-79.

Rainbow trout are raised commercially on trout farms at Bridport and Russell Falls. There are rainbow and brown trout in Tasmanian lakes and rivers (introduced as exotic species) but these may only be fished for by licensed sportsmen and may not be sold.

A commercial freshwater fishery for the short-finned eel was established in 1965. The catch in 1978-79 was 41 148 kilograms which was more than three times the catch of 11 942 kilograms in 1977-78.

### Fish Varieties and Species

The following table lists the main Tasmanian commercial fish varieties and species with their code numbers. The code numbers are prepared on behalf of the Federal/State Fisheries Conference by the Fisheries Division of the Federal Department of Agriculture.

Main Commercial Fish Varieties, Species and Code Numbers, Tasmania

Variety	Species	Variety	Species
Eel.....	<i>Anguilla australis</i>	Tuna.....	<i>Thunnus</i>
Whitebait.....	<i>Lovettia sealii</i>		<i>maccoyii</i>
Rainbow trout.....	<i>Salmo gairdnerii</i>		<i>T.alalunga</i>
Flounder.....	Fam. <i>Bothidae</i>		<i>Katsuwonus</i>
Cod.....	<i>Physiculus</i>		<i>pelamis</i>
	<i>barbatus</i>	Mackerel.....	<i>Auxis thazard</i>
		Snoek (barracouta)	<i>Leionura atun</i>
Mullet.....	<i>Mugil cephalus</i>	Garfish.....	<i>Hyporhamphus</i>
	<i>Aldrichetta</i>		<i>melanochir</i>
	<i>forsteri</i>	Southern rock	
Trevalla, deep sea.....	<i>Hyperoglyphe</i>	lobster.....	<i>Jasus novaehollan-</i>
	<i>porosa</i>		<i>diae</i>
Warehou.....	<i>Seriola brama</i>	Oyster.....	<i>Ostrea angasi</i>
Salmon.....	<i>Arripis trutta</i>		<i>Crassostrea gigas</i>
Morwong.....	<i>Nemadactylus</i> spp.	Scallop.....	<i>Pecten</i>
Trumpeter.....	<i>Latris lineatus</i>		<i>meridionalis</i>
	<i>Latridopsis</i>		<i>Equichlamys</i>
	<i>forsteri</i>		<i>bifrons</i>
			<i>Mimachlamys</i>
			<i>asperimus</i>
Flathead.....	<i>Neoplatycephalus</i>	Abalone.....	<i>Notohaliotis ruber</i>
	<i>fuscus</i>		<i>Schismotis</i>
	<i>N.richardsoni</i>		<i>laevigata</i>
	<i>N.speculator</i>		
	<i>Trudis bassensis</i>		
	<i>Leviprora</i>		
	<i>laevigata</i>		
Shark.....	<i>Mustelus</i>		
	<i>antarcticus</i>		
	<i>Galeorhinus</i>		
	<i>australis</i>		



### Fisheries Statistics

#### Source of Data and Method of Presentation

Statistics presented in this section have been supplied principally by the Tasmanian Fisheries Development Authority. In the preparation of fisheries production statistics, the quantities are generally in terms of the form in which the catch is taken from the water. For example, the statistics of fish production are in terms of 'estimated live weight' which is calculated from landed weights by using conversion factors for the various species. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on a 'whole weight' basis and molluscs (edible) on a 'gross (in-shell) weight' basis.

The actual edible yield varies depending on types of fish and methods of preparation. Barracouta yield about 51 per cent of live weight when filleted, and shark about 60 per cent when headed and gutted. The edible flesh in molluscs represents only a small portion of the in-shell weight. Approximately 1 kg of scallop flesh equals 4.5 kg in-shell weight and 1 kg of abalone flesh equals 2.25 kg in-shell weight.

The catch is generally defined as that landed in Tasmanian ports, regardless of whether it is caught in Tasmanian waters or not, or whether it is caught by Tasmanian fishermen or not. Shark, southern rock lobster and other fish taken by Victorian based fishermen in Tasmanian waters, but landed in Victoria, are included in the Victorian catch and excluded from Tasmanian figures on the basis that the catch influences the Victorian rather than the Tasmanian economy.

Details of production refer only to recorded commercial production. In view of the importance of amateur fishermen in certain types of fishing, details shown cannot be taken as representing the whole catch. In addition, it is likely that the figures shown understate, to some extent, the full commercial catch since no information is available on fish taken for sale by persons not licensed as professional fishermen.

### Employment and Boats

#### Persons Engaged and Boats

The following table shows details of persons and boats employed in the taking of fish, crustaceans and edible molluscs. The data are derived from boat registration records of the Tasmanian Fisheries Development Authority. The term 'number of crew' refers to the usual number of crew on registered fishing vessels and lacks the precision of the concept 'average number employed' used in statistics of other production sectors. Many of the fishermen operate part-time only, and may normally follow other occupations.

**Fisheries: Number and Value of Boats, Number of Crew, etc., (a) Tasmania**

Particulars	1975	1976	1977	1978	1979
Number of boats engaged (b) . . . . .	607	640	655	727	760
Value of boats engaged (b) . . . . . \$'000	13 060	14 918	15 464	18 034	21 811
Average value per boat . . . . . \$	21 516	23 309	23 610	24 806	28 699
Number of tender boats . . . . .	395	405	402	417	433
Total value of fishing gear . . . . . \$'000	1 255	1 379	1 438	1 678	2 218
Av. value of fishing gear per boat . . . . . \$	2 068	2 155	2 195	2 308	2 918
Number of crew . . . . .	1 347	1 439	1 466	1 620	1 687
Number of boats according to size (c)—					
Under 6 metres . . . . .	149	170	181	228	238
6 and under 9 metres . . . . .	81	83	89	104	109
9 and under 12 metres . . . . .	117	118	116	121	135
12 and under 15 metres . . . . .	150	148	142	141	148
15 and under 18 metres . . . . .	78	83	86	92	91
18 and under 21 metres . . . . .	15	17	19	18	17
21 and under 26 metres . . . . .	10	13	14	15	14
26 and under 30 metres . . . . .	4	5	5	5	5
30 metres and over . . . . .	3	3	3	3	3

(a) Based on figures collected in 1974 adjusted for new registrations and de-registrations.

(b) Excludes tender boats.

(c) Size groupings, originally in feet, have been directly converted to the nearest metre.

Boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol motors of low power. Offshore vessels range in length from 9 metres to over 30 metres and almost invariably are powered by diesel engines. Refrigeration of the catch at sea is becoming more common, the four main types being ice box, ice cooling, brine tanks and dry refrigeration; many boats have wells or deck tanks which can be used to keep the catch alive, e.g. southern rock lobster or abalone.

### Production

**Fish: Production by Type, Tasmania**  
(Estimated Live Weight, Tonnes) (a)

Type	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Australian salmon .....	371	631	473	r 573	611	451
Barracouta (snoek) .....	598	760	143	37	194	38
Cod .....	2	2	1	2	2	3
Flathead .....	73	23	32	29	112	186
Flounder .....	10	18	5	3	1	—
Garfish .....	50	40	35	28	20	21
Morwong .....	8	14	35	59	20	43
Mullet .....	7	7	5	4	6	3
Shark .....	1 187	651	1 238	1 130	1 710	1 490
Trevalla, deep-sea .....	100	75	59	56	64	109
Warehou .....						
Trumpeter .....	7	4	2	1	3	4
Tuna .....	n.a.	135	13	25	45	57
Other (b) .....	(c) 7 471	512	189	203	320	199
Total .....	(c) 9 884	2 870	2 229	2 153	3 105	2 605

(a) Estimated live weights are calculated from landed weights by conversion factors since quantities of fish are frequently reported in a gutted, headed and gutted, or otherwise reduced condition (e.g. barracouta and shark).

(b) Includes bait and freshwater species.

(c) Used mainly for input to a fish protein factory at Triabunna which closed down in mid-1974.

The fish types shown in the above table appear without any further description to identify the particular species but a specification of the more common species for each type is given earlier in this section. The figures, derived from fish buyers' transactions, do not reflect the actual production from Tasmanian waters due to: (i) landing at Tasmanian ports of fish caught in interstate waters; (ii) landing at interstate ports of fish caught in Tasmanian waters; and (iii) direct sales by fishermen.

### Crustaceans and Molluscs

In terms of value, the principal items in the Tasmanian catch are abalone and southern rock lobster (crayfish). The next table shows details of production of crustaceans and molluscs:

**Crustaceans and Molluscs: Production by Type, Tasmania**

Type	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
CRUSTACEANS (Whole weight, tonnes)						
Southern rock lobster .....	1 514	1 525	1 229	1 177	1 192	1 305
MOLLUSCS (In-shell weight, tonnes)						
Abalone .....	2 060	2 108	2 429	2 368	2 525	3 100
Scallops .....	1 158	1 261	690	498	400	1 077
Oysters .....	207	105	94	149	138	116
Squid .....	5	6	1	6	2	72
Other .....	—	—	—	—	2	(a) 14
Total .....	3 430	3 480	3 213	3 021	3 068	4 380

(a) Comprises eight tonnes of mussels and six tonnes of octopus.

Development of the Tasmanian abalone fishery dates from 1964 when divers commenced taking abalone for export. The 1963-64 catch was only 33 tonnes. In 1978-79 the catch was 3 100 tonnes which is 388 tonnes below the record 1970-71 abalone harvest of 3 488 tonnes.

#### Comparison with Other States

**Rock Lobster:** Total production of rock lobster in Australia during 1978-79 was 15 358 tonnes of which Tasmania produced eight per cent. The main producing states were Western Australia with 11 461 tonnes (75 per cent) and South Australia with 1 938 tonnes (13 per cent).

**Abalone:** In 1978-79 Tasmania was the leading producer of abalone in Australia contributing 50 per cent of the total Australian production of 6 197 tonnes. The Tasmanian catch for 1978-79 is 23 per cent higher than the previous year's figure of 2 525 tonnes. Victoria was the next major producer in 1978-79 with 1 430 tonnes.

**Scallops:** For many years Tasmania was the only state in Australia with a commercial scallop fishery; in 1955-56 Tasmania was joined by Queensland, but continued to retain its dominant position in the industry. However, in 1963 Tasmanian fishermen started a Victorian fishery in beds known to exist in Port Phillip Bay and the new site in its first year (1963-64) produced more than twice the quantity of the Tasmanian fishery. No scallops were dredged from Tasmanian waters in 1970-71, and only 52 tonnes in 1971-72. Following the discovery of new beds in Bass Strait the Tasmanian catch increased to 1 261 tonnes in 1974-75, but dropped significantly in the period from 1975-76 to 1977-78 before increasing to 1 077 tonnes in 1978-79. Victoria was the main Australian producer with 5 841 tonnes in 1978-79 which represented 55 per cent of Australia's production.

#### Fish Landed at Fishing Ports

The table that follows shows the proportion of fish landed at Tasmanian fishing ports. The information relates to port of landing only, and not to the area in which the catch was made.

Proportion of Fish (Live Weight) Landed at Each Port, Tasmania  
(Per Cent)

Port	1977-78	1978-79	Port	1977-78	1978-79
Derwent & Channel—			Bass Strait & Islands—		
Dover .....	2.3	0.5	Bridport .....	3.5	2.1
Hobart .....	5.6	5.8	Currie .....	1.0	0.7
Kettering .....	2.3	2.5	Lady Barron .....	5.3	4.4
Margate .....	3.5	4.0	Devonport (a) .....	29.9	32.1
Woodbridge .....	0.4	—	Smithton .....	1.1	1.4
			Stanley .....	14.5	21.5
			'Tamar' (b) .....	1.2	1.2
			Wynyard .....	0.8	1.6
Total .....	14.0	12.8	Total .....	57.3	65.0
East Coast and Peninsula—			West Coast—		
Bicheno .....	7.1	6.1			
Coles Bay .....	0.9	0.4	Strahan .....	4.0	5.3
St Helens .....	6.6	1.7			
Triabunna .....	3.7	1.8			
Dunalley .....	1.0	0.9			
Port Arthur .....	5.3	6.1			
Total .....	24.6	17.0	Total Tasmania .....	100.0	100.0

(a) Includes Port Sorrell.

(b) Launceston, Beauty Point and other Tamar ports.

**Proportion of Fish (Live Weight) Landed in Each Month, Tasmania  
(Per Cent)**

Month	1977-78	1978-79	Month	1977-78	1978-79
July .....	8.0	3.8	January .....	10.4	13.7
August .....	4.2	7.7	February .....	16.4	11.9
September .....	5.2	4.7	March .....	9.7	10.8
October .....	5.1	4.5	April .....	11.8	10.1
November .....	6.5	7.9	May .....	8.7	13.1
December .....	6.4	5.1	June .....	7.7	6.6

**Value of Production—Fishing**

The table that follows gives details of gross values of fishery products. (For definition of 'gross value' see later section 'Value of Production'.)

**Fisheries: Gross Value of Production, Tasmania  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Fish (a) .....	1 235	768	1 108	1 621	2 438	2 482
Crustaceans (b) .....	3 338	3 476	3 670	4 702	5 019	5 904
Molluscs .....	2 440	2 683	3 733	5 339	5 152	6 250
Total .....	7 014	6 928	8 511	11 662	12 609	14 636

(a) Includes value of seaweed harvested for production of alginate.

(b) Mainly southern rock lobster but includes crabs.

**Marketing**

In general terms, it can be said that production of fish, crustaceans and molluscs from the Tasmanian fisheries far exceeds the demand generated by the relatively small State population. It follows, therefore, that the industry is largely dependent on its ability to find export markets, both interstate and overseas, and this raises the problem of preserving a perishable product. The problem of preservation has three aspects: (i) at sea; (ii) on shore; and (iii) in transit to market. Of the 616 registered fishing boats in 1974, 201 boats (i.e. 33 per cent) had refrigeration plants of various kinds. In addition, some catches, e.g. southern rock lobster, can be kept alive in boat wells. Cold storage facilities ashore serve to hold the catch before its despatch to interstate and overseas markets while actual exports are carried by air, by refrigerated trailer and container, and in the refrigeration chambers of conventional ships. The following table shows the value of exports and imports of fishery products. The fact that Tasmania has an exportable surplus, yet nevertheless imports some fishery products, is chiefly due to differences in type; the imported varieties include canned sardines, anchovies, oysters, crabs, etc. together with frozen, salted or smoked varieties mainly of European, New Zealand, Canadian or U.S.A. origin. The establishment of the Tasmanian Fisheries Development Authority (see the next section) to promote and develop Tasmania's fishing industry should, if successful, result in significant changes in the industry. Increased catches will have to come from fish types not currently subject to heavy exploitation and this will be reflected in the types of fish being marketed.

**Fishery Products: Value of Exports and Imports, Tasmania  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>EXPORTS</b>						
Fish (a)—Overseas .....	64	4	21	46	50	81
Interstate .....	660	573	422	583	607	470
Southern rock lobster—						
Overseas .....	863	802	339	373	676	774
Interstate .....	2 988	2 371	1 440	2 127	1 780	3 853
Molluscs—Overseas .....	1 780	2 030	2 391	2 640	4 385	7 496
Interstate .....	849	551	325	853	136	195



**Fishery Products: Value of Exports and Imports, Tasmania—continued**  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>EXPORTS</b>						
All types—Overseas . . . .	2 707	2 836	2 751	3 058	5 111	8 351
Interstate . . . . .	4 497	3 495	2 187	3 563	2 523	4 518
Total . . . . .	7 204	6 333	4 939	6 621	7 634	12 869
<b>IMPORTS</b>						
Fish—						
Fresh and frozen—						
Overseas . . . . .	65	66	14	116	401	630
Interstate . . . . .	130	107	94	112	111	69
Preserved in tins—						
Overseas . . . . .	247	265	101	210	242	40
Interstate . . . . .	225	227	302	335	448	857
Other (b)—Overseas . . . .	1	1	1	1	2	19
Interstate . . . . .	31	21	16	34	37	17
All types—Overseas . . . .	313	332	116	328	645	689
Interstate . . . . .	386	355	412	481	596	943
Total . . . . .	699	686	528	809	1 241	1 632

(a) Includes fresh and frozen fish and fish preserved in tins.

(b) Includes smoked, salted and potted fish, extracts and caviar.

### Tasmanian Fisheries Development Authority

#### General

The management of Tasmanian fisheries in tidal waters is the responsibility of the Minister for Primary Industry under the *Fisheries Act 1959*. Prior to December 1977 that Act was administered by the Fisheries Division of the Department of Agriculture. Administrative responsibility is now vested in the Tasmanian Fisheries Development Authority.

The Tasmanian Fisheries Development Authority was established on 1 December 1977 under provisions of the *Fisheries Development Act 1977*. The Authority has the following objectives:

- (i) The promotion and development of the fishing industry that is carried on in or from Tasmania.
- (ii) The maintenance of proper standards with respect to fish and fish products intended for consumption in, or for export from, Tasmania both as to quality and as to the methods of handling, processing, storage, packaging and transport.
- (iii) The undertaking of research, exploratory and experimental work related to the management of the living resources in the waters around Tasmania and to the fishing industry of Tasmania.

#### Fisheries Promotion and Development

The Authority has begun implementing a formal development plan covering resource assessment, marketing and training. The Government, through the Authority, is providing the climate and stimulus to further develop and diversify effort by providing financial assistance to develop under utilised resources. Much needed information will also be gained by feasibility fishing ventures approved for squid and mid-water trawling around the Tasmanian coast and in off-shore areas. This will provide the industry with the necessary facts and data upon which commercial decisions can be made. The greatest potential for expansion is expected to be in pelagic species—particularly squid and mackerel.

Funds were also provided by Government in 1980 to carry out exploratory fishing studies in underdeveloped species and to seek out new areas for expanding trawling operations in coastal waters. Attention was also to be given to aquaculture, particularly oysters and mussels which have a very bright future.

The industry is being encouraged to give greater emphasis to the processing and marketing aspects of the industry, paying special attention to the quality of the product.

In conjunction with fishing industry organisations, the Authority produces the magazine *Fintas* which is distributed bi-monthly to all fishermen and processors engaged in the Tasmanian fishing industry.

### *Research*

Research and development work of the Authority centres on demersal (bottom living) and pelagic fish, shellfish and aquaculture.

In the demersal fish program elucidation of the extent of trawl ground and the potential yields of fish from these grounds is the main research aim. Species such as morwong, flathead, dories and blue grenadier are under investigation.

Pelagic fish and shellfish work is centring on jack mackerel and squid. Determination of resource size and catching methods are under investigation. Other shellfish work concerns exploratory fishing for crabs and clams; this investigation is supported by a grant from the Fishing Industry Research Trust Account.

In aquaculture, oysters and mussels are emphasised species. The Authority's laboratory at Taroona has been producing oyster spat in a pilot scale hatchery operation and dispatching them to oyster growers for trial on-growing. Mussel condition and settlement is being monitored at three sites in the south-east to determine seasonal effects.

### *Fisheries Control*

The management and conservation of existing fisheries, both commercial and recreational, is an integral part of the Authority's responsibilities. Patrol and inspection duties are carried out by Authority officers throughout the State. As well as Tasmanian fisheries, certain Australian waters and the Tasmanian section of the continental shelf are patrolled. In addition, the provisions of the Australia-Japan Fishing Agreement are enforced and regular inspections of Japanese fishing vessels are made when these enter the port of Hobart. For fisheries control and patrol purposes, the Authority has two long-range vessels, one measuring 16 metres and the other 14.5 metres, plus five high-speed runabout type vessels. In addition, frequent use of light aircraft is made to assist in patrol duties.

A special aquaculture inspector has been appointed to liaise with oyster farmers and other persons engaged in sea fish farming. This officer assists and facilitates applicants in obtaining the necessary leases or permits to operate sea farms.

The Authority has district offices at Hobart, St. Helens, Launceston, Burnie, Smithton and Sorell.

The Authority is responsible for issuing licences to Tasmanian-based saltwater fishermen. The types and numbers of licences in force during 1979-80 were as follows: fishing boat licences, 784; commercial crayfish pot licences, 358; commercial scallop licences, 126; fisherman's licences, 835; non-commercial diving licences, 2 171; non-commercial scallop licences, 58; purse seining licences, 3; and trawl licence, 1.

## **Appendix**

### **VALUE OF PRODUCTION, PRIMARY INDUSTRIES**

#### **Introduction**

The statistics contained in this appendix are compiled annually and include gross and local values of production for agricultural commodities, forestry, fishing and hunting but exclude details relating to mining.

#### *Forestry, Fishing and Hunting*

Estimates of gross and local value of production are calculated for forestry, fishing and hunting and are included with statistics for agricultural commodities in a table below. Because of difficulties and the cost involved, it is not practicable to collect statistics on an integrated economic census basis for these industries and therefore direct comparisons can not be made with the mining, manufacturing, etc. industry sectors.

### Agriculture

It has not been practicable until recent years to undertake regular collections of statistics on farm income and expenditure direct from farmers. Instead, estimates have been made of the gross and local values of farm production each year, the basis of these estimates being, in the main, commodity data obtained from the annual agricultural census. Notes below indicate the scope of these estimates and sources of information as well as definitions of the terms *gross* and *local* value of production.

Advances in computer processing have now made it feasible to conduct, on a sample basis, agricultural finance surveys and results of these surveys have been published by the Australian Statistician for the years 1971-72 to 1977-78 and are also included in this publication (see Chapter 7). From 1977-78, the frequency of these surveys has been changed from an annual to a triennial basis with the next survey due in 1980-81. The surveys are based on new data concepts which enable comparisons to be made between the agricultural sector and other industries such as mining, manufacturing, etc., which are included in integrated economic censuses. 'Value added' for the various industry sectors covered by the integrated economic censuses are compared with value added for the agricultural sector (based on agricultural finance surveys) in the section 'Integrated Economic Censuses' in Chapter 18.

### Definitions

The following uniform definitions, where appropriate, are employed for primary industries:

- (i) *Gross Value of Production* is the value placed on recorded production at the wholesale prices realised at the principal markets. In cases where primary products are consumed at the place of production, or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets. Subsidies and bounties paid by the State and Federal Governments to primary industries are, in general, included in gross value of production.
- (ii) *Marketing Costs* include freight, cost of containers, commission and other charges incidental thereto.
- (iii) *Local Value of Production* is the value placed on commodities at the place of production and is calculated by deducting marketing costs from the gross value of commodities produced.

### Sources of Information

#### *Primary Production, Agriculture*

The data used are those concerning quantity of agricultural production (supplied principally by farmers, etc.) together with information collected from various sources on prices realised in the principal markets for different products and the costs of marketing these products. Price and cost data are obtained from statutory authorities (e.g. Australian Wheat Board), market reports, special returns collected from wholesalers, brokers, auctioneers, etc., and from overseas and interstate trade statistics.

#### *Primary Production, Other*

- (i) *Hunting*: Principal data are derived from export of skins and information on the annual mutton bird catch.
- (ii) *Forestry*: Principal value data are available from the annual factory census, since forestry products are the basic raw material for sawmills, newsprint and paper mills, etc.
- (iii) *Fishing*: Quantity data and prices are collected from fish wholesalers and agents.

#### *Period Covered*

*Primary, Crops*: Generally, production from crops grown during the year ended 31 March. The crop production year in Tasmania is comparable with that used for other agricultural products—year ended 30 June.

*Primary, Other Agriculture*: Year ended 30 June.

**The Agricultural Industry**

The Agricultural industry, for value of production purposes, is divided into: (i) crops; (ii) livestock slaughterings and other disposals; and (iii) livestock products.

**Crops**

The following table shows gross values for the crops sector:

**Crops: Gross Value, Tasmania (a)**  
(\$'000)

Crop	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Cereals for grain .....	2 916	3 164	2 261	3 999	3 000	5 007
Legumes mainly for grain .....	376	525	r 185	r 205	r 185	430
Crops for hay (a) .....	394	530	146	478	161	290
Orchard tree fruit .....	14 473	14 910	13 138	12 137	r 13 465	17 513
Berry and small fruit .....	949	1 406	794	944	r 1 226	1 351
Vegetables for sale for human consumption .....	13 374	15 071	r 17 438	r 23 256	r 22 408	29 877
Other crops (b) .....	4 765	3 064	4 450	r 7 979	r 11 209	16 663
Pasture harvested for hay .....	8 839	10 470	5 628	8 478	4 141	8 301
Pasture harvested for seed .....	562	269	r 52	r 128	r 85	621
Total .....	46 649	49 409	r 44 092	r 57 604	r 55 880	80 053

(a) Excludes crops and pasture harvested for green feed or silage.

(b) Excludes harvested pasture.

The next table shows quantity and value details for the main items comprising the crops sector. Also included in the table is the average value per unit of production.

**Crops: Gross Value, Tasmania 1978-79**

Crop	Production	Gross value	
		Per unit	Total
		\$	\$'000
Crops (excluding pasture harvested)—			
Cereals for grain—			
Barley .....	26 971	122.11	3 293
Oats .....	11 826	117.99	1 395
Wheat .....	2 867	108.92	312
Total cereals for grain .....	..	..	(a) 5 007
Legumes mainly for grain—			
Peas, field .....	1 850	196.79	364
Total legumes mainly for grain .....	..	..	(a) 430
Crops for hay (b) .....	9 383	30.93	290
Fruit—			
Orchard tree fruit—			
Apples .....	85 230	195.49	(c) 16 662
Pears .....	2 643	248.20	(d) 656
Total orchard tree fruit .....	..	..	(a) 17 513
Berry and small fruit—			
Currants .....	787	722	569
Loganberries .....	138	780	108
Raspberries .....	424	870	369
Strawberries .....	104	1 680	174
Total berry and small fruit .....	..	..	(a) 1 351

## Crops: Gross Value, Tasmania 1978-79—continued

Crop	Production	Gross value	
		Per unit	Total
		\$	\$'000
Vegetables for sale for human consumption—			
Beans, French and runner .....	13 464	191.34	2 576
Peas, green (ex-shell) .....	30 179	223.00	6 730
Potatoes .....	124 385	103.43	12 865
Total vegetables for sale for human consumption .....	..	..	(a) 29 877
Other crops—			
Hops (dry weight) .....	1 457	2 201.96	3 209
Other .....	..	..	13 454
Total other crops .....	..	..	16 663
Total (excluding crops from pasture) .....	..	..	71 131
Pasture (e) harvested—			
Pasture harvested for—Hay .....	295 464	28.09	8 301
Seed .....	721 792	0.86	621
Total crops from pasture .....	..	..	8 922
Total all crops .....	..	..	80 053

(a) Includes other crops not specified in the table.

(b) Excludes pasture for hay.

(c) Includes stabilisation payments of \$1 962 000 and \$1 923 000 for payments under the *Apple Industry Assistance Act*.(d) Includes stabilisation payments of *minus* \$4 300.

(e) Includes lucerne.

**Average Unit Gross Values:** In the next table, average unit gross values for the principal crops are shown for a six-year period. The unit values have been calculated for the principal agricultural products by dividing the total quantity produced into the total gross value of production for each crop. They therefore represent weighted average 'prices' of the product in all markets (including the farm itself where quantities are retained for farm use) and indicate trends rather than prices actually paid to farmers.

Average Unit Gross Values: Principal Crops, Tasmania  
(\$)

Crop	Unit of quantity	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Cereals for grain—							
Barley .....	t	77.00	91.78	98.83	111.07	120.54	122.11
Oats .....	t	87.11	77.53	78.80	107.61	122.53	117.99
Wheat .....	t	103.97	103.51	97.31	82.00	86.40	108.92
Legumes mainly for grain—							
Peas, field .....	t	184.46	165.12	155.33	180.15	204.49	196.79
Crops for hay .....	t	30.11	63.95	29.17	49.81	27.47	30.93
Vegetables for sale for human consumption—							
Beans, French and runner .....	t	97.03	118.64	145.28	162.63	177.55	191.34
Peas, green (ex-shell) .....	t	115.72	162.89	183.20	212.41	214.70	223.00
Potatoes .....	t	86.92	59.43	76.76	83.33	82.80	103.43

Average Unit Gross Values: Principal Crops, Tasmania—continued  
(\$)

Crop	Unit of quantity	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Orchard tree fruit—							
Apples .....	t	120.46	148.65	172.99	164.64	r 201.90	195.49
Apricots .....	t	177.49	342.89	223.87	217.08	r 307.30	341.45
Pears .....	t	117.11	180.70	171.42	195.11	r 260.80	248.20
Berry and small fruit—							
Blackberries .....	kg	0.27	0.41	0.40	0.50	0.76	0.79
Currants .....	kg	0.39	0.47	0.50	0.55	0.70	0.72
Gooseberries .....	kg	0.24	0.31	0.32	0.44	r 0.50	0.50
Loganberries .....	kg	0.38	0.46	0.47	0.57	r 0.73	0.78
Raspberries .....	kg	0.41	0.53	0.50	0.58	0.74	0.87
Strawberries .....	kg	1.02	1.73	1.60	1.55	1.65	1.68
Hops .....	kg	1.65	0.86	1.40	1.69	1.96	2.20
Pasture (a) for hay .....	t	19.72	27.85	17.47	25.31	24.87	28.09
Pasture (a) for seed—							
Clover .....	kg	1.02	1.34	1.14	1.30	1.24	1.90
Other .....	kg	0.49	0.45	r 0.33	r 0.50	r 0.62	0.86

(a) Includes lucerne.

## Livestock Slaughterings and other Disposals

For the main categories of livestock sold for slaughter, the first of the next two tables shows the gross value of production (including an adjustment for net exports), and the second table the average prices paid:

Livestock Slaughterings and Other Disposals (a): Gross Value, Tasmania  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Cattle and calves .....	41 314	17 753	20 740	27 686	r 33 915	60 713
Sheep and lambs .....	10 209	6 359	5 710	9 565	r 11 655	20 455
Pigs .....	4 992	5 625	5 481	6 028	r 5 790	6 378
Poultry .....	1 505	1 970	2 121	2 824	3 416	4 191
Total .....	58 019	31 707	34 052	46 103	r 54 776	91 737

(a) Includes an adjustment for net export of live animals.

Average Livestock Prices, Tasmania (a)  
(\$)

Livestock	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Cattle (other than calves) .....	145.21	71.13	71.24	90.10	103.55	240.39
Sheep .....	9.58	3.54	2.75	5.76	7.67	14.46
Lambs .....	14.20	7.92	8.10	11.49	12.05	18.58
Pigs .....	43.13	54.86	58.27	60.11	62.37	69.67

(a) Estimated average prices, on the hoof, of livestock sold for slaughter.

## Livestock Products

A wide range of goods are manufactured in Tasmanian factories from livestock products. The two major products, wool and milk, in terms of gross value, accounted for 46 and 49 per cent of the total respectively, in 1978-79.

Details of gross values for livestock products for years recent 1973-74 to 1978-79 are shown below:

**Livestock products: Gross Value, Tasmania  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Wool—						
Shorn (including crutchings) .....	30 226	22 930	27 139	33 000	34 559	39 867
Fellmongered and exported on skins ..	1 747	960	1 281	1 993	2 349	2 175
Total .....	31 973	23 890	28 420	34 993	36 908	42 043
Dairy products, whole milk used for—						
Processing .....	17 369	22 407	21 085	24 462	26 102	33 596
Human consumption and other purposes ..	5 775	6 951	7 669	8 601	8 693	10 416
Total dairy products .....	23 144	29 358	28 754	33 063	34 795	44 012
Eggs <i>r</i> .....	2 150	2 835	3 031	3 595	3 751	3 815
Honey .....	322	423	446	410	623	613
Beeswax .....	8	14	21	14	31	35
Total livestock products <i>r</i> .....	57 597	56 520	60 672	72 075	76 108	90 518

**All Primary Industries (Excluding Mining)**

In the table that follows *gross* and *local* values of production for all primary industries (excluding mining) are shown for the last six years:

**Tasmanian Primary Production: Gross and Local Value  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78 <i>r</i>	1978-79
<b>CROPS (a)</b>						
Gross value of production .....	46 649	49 409	<i>r</i> 44 092	<i>r</i> 57 604	55 880	80 053
Less Marketing costs .....	9 680	9 739	<i>r</i> 7 742	<i>r</i> 6 970	6 066	8 163
Local value of production .....	36 969	39 670	<i>r</i> 36 350	<i>r</i> 50 634	49 814	71 890
<b>LIVESTOCK SLAUGHTERINGS AND OTHER DISPOSALS</b>						
Gross value of production .....	58 019	31 707	34 052	46 103	54 776	91 737
Less Marketing costs .....	4 019	2 624	3 010	3 904	6 921	11 540
Local value of production .....	54 000	29 083	31 042	42 199	47 855	80 197
<b>LIVESTOCK PRODUCTS <i>r</i></b>						
Gross value of production .....	57 597	56 520	60 672	72 075	76 108	90 518
Less Marketing costs .....	3 382	3 396	3 681	3 899	3 953	4 221
Local value of production .....	54 215	53 124	56 991	68 176	72 155	86 297
<b>TOTAL AGRICULTURE (a) <i>r</i></b>						
Gross value of production .....	162 265	137 636	138 816	175 782	186 764	262 308
Less Marketing costs .....	17 081	15 760	14 433	14 773	16 940	23 924
Local value of production .....	145 184	121 876	124 383	161 009	169 824	238 384
<b>FORESTRY</b>						
Gross value of production .....	43 273	50 022	46 991	55 429	60 645	66 058
Less Marketing costs .....	7 393	7 160	6 317	7 528	7 152	12 104
Local value of production .....	35 880	42 862	40 674	47 901	53 494	53 954

**Tasmanian Primary Production: Gross and Local Value—continued**  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>FISHING</b>						
Gross value of production .....	7 014	6 928	8 511	11 662	12 609	14 636
Less Marketing costs .....	—	—	—	—	—	—
Local value of production .....	7 014	6 928	8 511	11 662	12 609	14 636
<b>HUNTING</b>						
Gross value of production .....	470	428	531	445	649	1 321
Less Marketing costs .....	31	29	31	40	54	132
Local value of production .....	439	399	500	405	595	1 189
<b>TOTAL PRIMARY (EXCLUDING MINING) (a) r</b>						
Gross value of production .....	213 022	195 014	194 849	243 318	260 667	344 323
Less Marketing costs .....	24 505	22 948	20 781	22 341	24 146	36 160
Local value of production .....	188 517	172 066	174 068	220 977	236 522	308 163

(a) Excludes crops and pastures harvested for green feed and silage.

**Further References**

*ABS Publications Produced by the Tasmanian Office*

Sawmilling, Woodchipping, etc. Statistics, Tasmania (8203.6) (quarterly, March 1980 issue released 11-6-80, 4 pp.)

Mining Industry, Tasmania (8401.6) (annual, 1978-79 released September 1980, 13 pp.)

Agricultural Industry, Tasmania (7101.6) (annual, 1978-79 released January 1980, 70 pp.)

Value of Agricultural Commodities Produced, Tasmania (7501.6) (annual, 1978-79 released 31-7-80, 5 pp.)

*ABS Publications Produced by the Canberra Office*

ASIC, Australian Standard Industrial Classification (irregular, 1978 edition released June 1978)—

Vol. 1: The Classification (1201.0) (479 pp.)

Vol. 2: Alphabetic Index of Primary Activities (1202.0) (199 pp.)

Mineral Production (8405.0) (annual, 1978-79 issue released 27-5-80, 15 pp.)

Fisheries (7603.0) (annual, 1978-79 released 3-6-80, 31 pp.)



## Chapter 9

### MANUFACTURING AND ENERGY

#### INDUSTRIAL DEVELOPMENT

##### Primary-Secondary Relativity

Prior to World War II, there were few large manufacturing establishments in Tasmania. The economy of the State was dominated by primary industries which, in 1938-39, accounted for 60 per cent of the net value of production of all recorded industries.

By today's criteria, pre-war operations of manufacturing establishments were on a small scale but some enterprises have since emerged as national leaders in particular fields. Despite the limitations of geographical isolation and a relatively small domestic market the State went through a period of important industrial development following World War II; the cessation of hostilities released a world-wide demand for goods and services and a number of new Tasmanian factories were established to take advantage of the situation.

Post-war expansion of factory activity has made the State an important supplier of manufactured goods and processed materials. Major factories which have been established since World War II include producers of chemicals, woodpulp, textiles, processed foods, industrial equipment, refined aluminium, manganese alloys, iron ore pellets and woodchips. Steady, large-scale development of the State's hydro-electricity resources made such expansion possible.

Since the early 1950s, the manufacturing sector has been predominant in terms of its economic significance to the State. (See the section 'Integrated Economic Censuses' in Chapter 18 for an inter-sector comparison of various industry sectors.)

##### Tasmania as a Site for Industry

###### *Advantages*

Tasmania has certain advantages which have attracted new industrial enterprises. The principal factors are:

*Hydro-Electric Power:* The availability of cheap, bulk electricity for power intensive industries (e.g. in metal smelting and refining, heavy chemicals, paper and paper pulp making) has had a significant influence on Tasmania's industrial development and is discussed in greater detail below.

*Water Resources:* In some parts of the world, water resources are inadequate; shortage of water and the high cost of conservation, re-use and 'purification' have become major problems in the expansion of industry. This is not the situation in Tasmania where water is abundant. The terrain favours the economical construction of high-level storages, while run-of-the-river pumping schemes are feasible at many sites.

*Industrial Land, Harbours and Shipping:* The decentralized nature of the State and a policy of making provision for industry in each main region has enabled industrial land to be both readily available and cheap. Its proximity to deep-sea ports is another factor influencing the expansion of industry in and around the four main centres of population (Hobart, Launceston, Burnie and Devonport). The associated ports are fully equipped to handle unitised, containerised, roll-on/roll-off and orthodox cargoes, as well as cargo in bulk form. They are served by overseas and interstate ships using modern cargo handling techniques.

*Stability of the Workforce:* Tasmania has established a record over many years for having fewer industrial disputes and, almost always, fewer days lost per employee each year due to strikes, than any other Australian state. The Tasmanian workforce also exhibits a more stable pattern in terms of duration of employment.





Mt Wright, Denison Range

*[Edward Gall]*

Mr Lott, Anne Range

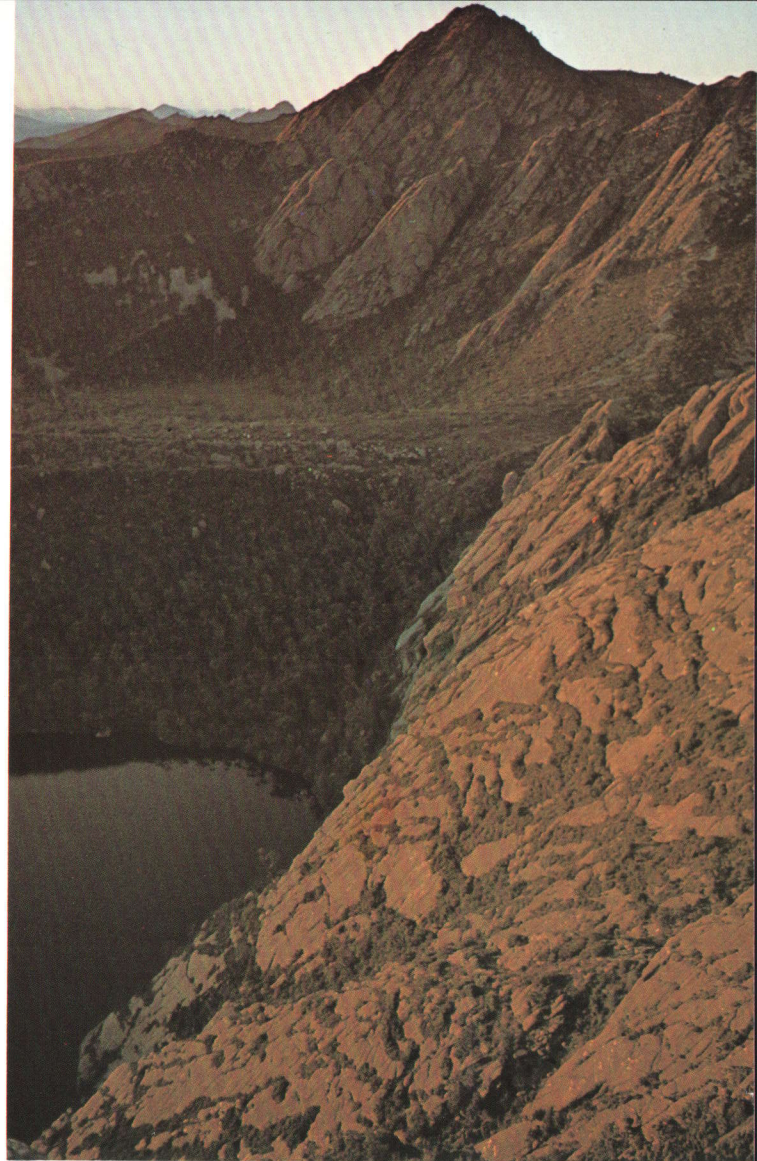






Lake Vesta (foreground), Lake Juno, Carina Peak and Prominotory Lake

*[Edward Gall]*



Reeds Peak and Lake Murray from Lake Malana, Denison Range

### *The Department of Industrial Development*

The policy of the State Government is to encourage the establishment and growth of industries in Tasmania and to promote trade as provided by the *Industrial Development Act 1954*. This Act is administered by the Director of the Department of Industrial Development under the Minister for Economic Planning and Development.

The Department of Industrial Development gives advice, information and assistance on a wide range of important industrial matters. It is empowered to provide financial assistance, including loan guarantees and a comprehensive grants and incentives program, to help the expansion of existing industries and the establishment of new enterprises. As a service to industry, the Department has officers specialising in the areas of finance, trade, development, research, small businesses and the publication of information, and they are supported by the resources and expertise of Federal and other State Government departments and instrumentalities.

### **Electric Power and Industrialisation**

The key to the large scale industrial development of Tasmania was its abundant water at high level in the Central Plateau and the State's industrial revolution may be thought of as beginning in 1916 when the Waddamana turbines below the Great Lake began operating; from the initial 7 500 kW then developed, the hydro-electric system has expanded to a capacity of 1.5m kW (excluding steam turbines at Bell Bay with a generator capacity of 240 000 kW). The availability of cheap electric power resulted in the establishment of new types of industry, some on a very large scale; examples are: electrolytic zinc production, 1916; carbide manufacture, 1918; fine paper production, 1938; aluminium production, 1955; and ferro-manganese production, 1962. However, certain industrial expansion proposals currently under consideration may not proceed due to uncertainty as to whether sufficient electric power would be available upon their completion. The introduction of pulp and paper manufacture was a special case to the extent that changes in technology made possible the use of native hardwoods for the first time; the production of suitable pulp from eucalypts was pioneered in Tasmania before plants were established in other Australian states.

### **Major Industries**

*Source of Data: In normal circumstances, the Bureau of Statistics does not publish information relating to any single enterprise or establishment, and treats any such information it collects as strictly confidential. It does, however, publish statistical aggregates where they do not directly or indirectly reveal the operations of any single informant. A description of industrial development without mentioning individual organisations is not very illuminating; therefore, the State Department of Industrial Development has prepared the following section and accepts responsibility for the information given.*

Brief descriptions of some of the major factories operating in Tasmania are given below (see the section 'Mining', in Chapter 8, for descriptions of some of the major mining companies operating in the State):

*Associated Pulp and Paper Mills Ltd (Burnie, Wesley Vale, Long Reach):* This group of companies is a major Australian integrated forest products complex and Australia's principal producer of fine printing and writing papers, magazine papers and coated papers. In Tasmania the Company operates major manufacturing complexes at four centres: (i) *Burnie*—where it commenced paper production in 1938; present annual capacity of the Burnie pulp and paper plant is 145 000 tonnes. In addition the Company operates three sawmills at Burnie and Wynyard through its wholly owned subsidiary company, Burnie Timber Pty Ltd. The Company also acquired, in 1979, Tasmanian Plywood Mills Pty Ltd which is based at Somerset. (ii) *Wesley Vale*—In 1970 the first stage of an integrated pulp and paper complex was completed when the first paper machine commenced production. The machine has an annual capacity of about 45 000 tonnes of paper. Production at Wesley Vale is mainly of magazine papers. A particle board factory, run by the subsidiary Burnie Timber Pty Ltd, also operates at Wesley Vale; annual production is about 2.0m square metres. (iii) *Long Reach*—A.P.P.M. completed its woodchip plant and made its first export shipment in 1972. The Company has long-term contracts for the export of woodchips to Japan. (iv) *Triabunna*—In 1979 A.P.P.M. took over Tasmanian Pulp and Forest Holdings Ltd which operates a woodchip export mill at Triabunna and also has long-term contracts with Japan.

*Australian Newsprint Mills Ltd (Boyer):* Since beginning operations in 1941, this Company has, through a series of expansion programs, increased its annual production of



newsprint from 27 400 tonnes to its present capacity of 220 000 tonnes. The construction of a \$10.5 million thermo-mechanical pulping plant, to produce pulp for the production of newsprint from *Pinus radiata* chips, began early in 1977 and was completed in September 1978. In conjunction with the construction of the new pulping plant, the Company is installing two modern grinders at a cost of approximately \$2 million to increase capacity and replace obsolete machines. (In 1979 the Company commenced construction of a \$160 million newsprint mill at Albury in New South Wales. The new mill is expected to come into production early in 1981.)

*Cadbury Schweppes Australia Ltd (Claremont)*: In 1921 an association of three British confectioners established their Australian plant at Claremont, near Hobart. Today, the plant is the largest cocoa and confectionery factory in Australia. In conjunction with H. P. Bulmer and Co., a plant was installed at Claremont in 1974 for apple juice extraction and concentration for export. During 1976 chocolate production capacity increased when a new chocolate refining layout was commissioned. In 1978 shipment of dairy milk chocolate to the Company's Ringwood factory in Victoria commenced and total production was increased as a result. The Pascall sugar confectionery production was transferred to Victoria at the end of 1980 but has been replaced in volume terms by increased bulk chocolate shipment to the Mainland and the transfer of the 'Snack' moulded range to Claremont.

*Cascade Group of Companies (Statewide)*: The Company is the oldest manufacturing company in Australia and is firmly established in the beverage industry at manufacturing, wholesale and retail levels. The Company manufactures alcoholic beverages through the only two breweries in the State: at Esk Brewery, Launceston (Boags Beer) and Cascade Brewery, Hobart (Cascade Beer). Alcoholic cider (manufacturer, Huoncry), is produced at its South Hobart factory. Non-alcoholic cider, soft drinks, pure fruit juices, fruit juice syrups, berry fruit pulps and concentrates for local and export distribution are manufactured at Cascades, Hobart. The operating capacity for its malt works, conducted by Tasmanian Breweries Pty Ltd to supply its two breweries, has recently been increased to 500 000 bushels per annum to allow surplus production for export.

*Coats Patons (Aust.) Ltd (Launceston)*: This Company first produced yarns in Tasmania nearly 60 years ago. Since 1976 a major updating of machinery has taken place. The factory produces knitting yarns, both wool and synthetic, and annual production is approximately 1.5 million kilograms.

*Comalco Aluminium (Bell Bay) Ltd (George Town)*: An aluminium smelter and alumina refinery commenced production in 1955 at Bell Bay under Federal Government ownership. In 1961 the plant and facilities were acquired by the present Company which, by successive expansion programs, has increased production of aluminium nine-fold. Refinery operations ceased in 1974 and alumina for smelting is now imported from Queensland. During 1980, a \$28.8 million program to replace the original plant's now outdated smelting facilities was planned to increase production capacity from 114 500 tonnes to 119 500 tonnes per annum.

*Edgell, Division of Petersville Ltd (Devonport and Ulverstone)*: This Company is Tasmania's leading processor of frozen and canned vegetables. The annual volume of raw materials required by the Ulverstone and Devonport factories is approximately 123 000 tonnes, the main crops processed being potatoes, green peas and green beans.

*Electrolytic Zinc Company of A/asia Ltd (Risdon and Rosebery)*: Established in 1916, the factory at Risdon is the largest producer of zinc in Australia and the second largest electrolytic zinc plant in the world. It exports an extensive range of zinc and zinc alloys to over 30 countries. The Risdon plant has the capacity to produce more than 600 tonnes of zinc per day. Apart from zinc and zinc alloys the Company also produces cadmium, sulphuric acid, superphosphate, sulphate of ammonia and aluminium sulphate. Production capacity at the Company's mining complex at Rosebery is 610 000 tonnes of silver-lead-zinc ore per annum. The zinc plant supplies a large proportion of Australia's total requirements.

*General Jones Pty Ltd (Smithton and Scottsdale)*: General Jones continued their expansion in 1980 with the acquisition of Wattie Pict Ltd. Expansion will increase the diversification of the Company into new products, especially French fry potatoes. Main brands are Copper Kettle and Pict.

*Goliath Portland Cement Co. Ltd (Railton)*: Formed in 1928 to take over a small plant, the Company began production in 1930 with an annual output of 66 000 tonnes of cement a year. Production capacity has since increased rapidly. Plant expansion in 1970 lifted annual

production capacity to over 500 000 tonnes and plant kiln capacity was increased to one million tonnes in 1980. In 1972 the Group acquired Besser Holdings Limited. In 1977 the Company launched its own 4 000-tonne ship, the *M.V. Goliath*, to transport bulk cement to the mainland markets. The Company also produces approximately 1 000 000 square metres of asbestos cement sheeting each year. In 1979 the Group acquired the Cornwall Coal Company N.L.—Tasmania's only coal producer.

**Humes Ltd (Statewide):** Produces pre-cast concrete stormwater, sewerage and water supply pipes, with associated fittings and a wide and varied range of pre-cast concrete products. Rigid u.P.V.C. (unplasticised poly vinyl chloride) pipe is extruded in Launceston for use in stormwater, sewerage, water supply and irrigation, together with an appropriate range of u.P.V.C. fittings. Vitrified clay pipes and products are produced at Granton. Reinforcing mesh and rod is pre-fabricated at the Company's Steel Division plant at Burnie. A subsidiary company, Steel Mains Pty Ltd manufactures water, steam and oil lines up to six metres in diameter. This Company also manufactures pressure vessels, spheres, bulk storage tanks, etc. A field crew operates throughout the State and installs all types of structural steel, pipelines and mechanical items.

**Repco Bearing Company (Launceston):** In 1949 this Company was established to manufacture engine bearings for the Australian automotive spare parts trade. The factory has since expanded and diversified its range of products and is now the largest automotive bearing manufacturing company in Australia. The Company also undertakes general contract machining and precision work, precision tool making, the manufacture of copper, tin and alloy powders, and the manufacture of sintered products using powder metallurgy techniques.

**Sheridan Domestic Textiles (Derwent Park):** Formerly known as U.T.A. Hobart Mill, Sheridan Domestic Textiles is part of the Clothing, Footwear and Textile Group of Dunlop Australia Ltd. The Derwent Park mill commenced operations as Silk & Textile Printers Pty Ltd in 1948. Production now involves the printing of natural and synthetic furnishing fabrics, shower curtain fabrics and mattress ticking, and printing and dyeing of polyester/cotton sheeting. The mill also manufactures and distributes finished domestic articles in the form of printed and plain dyed sheets, continental quilt covers, and ruffled pillowcases in fine polyester/cotton percale, nylon shower curtains and Yves St Laurent and Hardy Amies ranges of top quality sheets and quilt covers.

**Stanley Tools (Moonah):** A Division of The Stanley Works Pty Ltd: The Company is Tasmania's only manufacturer of hand tools. During 1981-82, Stanley Tools has planned for further expansion relative to new processes and the introduction of a completely new product line. This development will necessitate construction of a components product factory. Relocation of screwdriver manufacture from Stanley's Hardware Division (Melbourne) to the Moonah Works has been completed with much of the manufacturing processes and equipment being upgraded during the transfer. During 1981 several new products will be manufactured specifically for the export market.

**Tasmanian Electro-Metallurgical Co. Pty Ltd (Bell Bay):** The Broken Hill Co. Pty Ltd established a plant in 1962 to produce high carbon ferro-manganese for the Australian steel industry, with an initial annual output in excess of 26 000 tonnes. Silico-manganese alloys are now also being produced and a recent \$42 million expansion program increased capacity from 77 000 tonnes to about 150 000 tonnes a year. This expansion also enabled production of ferro-silicon in Tasmania for the first time and the production of manganese ore sinter on an 18 metre square sinter machine at the rate of 725 tonnes of sinter per day.

**Tioxide Australia Pty Ltd (Burnie):** This Company is a manufacturer of titanium pigments which are used as the base white pigment in paints, enamels, plastics, printing inks, rubber, paper, man-made fibres and a number of other products. At the present time, ten different grades of pigment are made to meet the varying requirements of user industries. The Company was formed in 1937 as Australian Titan Products Pty Ltd. Plans for construction of the Heybridge plant were delayed by the Second World War and the factory was commissioned in December 1948. The initial annual output was 1 500 tonnes. Successive expansions have raised annual production capacity to 32 000 tonnes. The Company was completing a \$3.5m expansion program during 1980-81 to further improve the technical characteristics of pigments. Tioxide is the predominant supplier of titanium pigments to the Australian market and an increasingly significant supplier to South-East Asian countries. A staff of approximately 400 was employed in mid-1980.

**Tootal Australia Limited (Devonport):** This Company was established in 1952 as a vertical textile company manufacturing woven and knitted man-made fibre fabrics. It produces workwear fabrics in polyester/cotton, fashion dress goods, both dyed and printed, and a wide range of garments for industrial and casual end use. The Company has Australia-wide distribution through its own selling offices in all capital cities. Employment is in excess of 400 persons.

**United Milk Products (Smithton):** This is one of the State's principal producers of dairy produce. Production recently reached approximately the levels shown: butter (salted and unsalted), 2 000 tonnes; cheese (cheddar), 8 500 tonnes; milk powders (skim, full cream and buttermilk), 3 000 tonnes; and casein (acid), 200 tonnes per annum. The Company also operates an abattoir exporting 90 per cent of its output overseas.

## MANUFACTURING STATISTICS

### Principal Articles Manufactured

The articles listed below do not include the following important Tasmanian products: aluminium, automotive engine bearings, carbide, cement, confectionery, ferro-manganese alloys, hand tools, hardboard, iron ore pellets, particle board; printing, writing and wrapping papers; starch; titanium di-oxide; canned, dehydrated and quick frozen vegetables; woodpulp, woollen manufactures, and other textile products. Where there are only one or two producers or where one producer dominates, it is not possible to publish details for articles that are important and would otherwise be included. Some articles, although principal manufactures, such as cakes, pastry and pies, wooden furniture and joinery (excluding doors) are not included, as value details only are collected for such items.

The following table lists the principal articles manufactured in Tasmania (with the exceptions detailed above) for recent years:

Principal Articles Manufactured: Quantities, Tasmania

Article	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Acid, sulphuric .....	517 052	466 817	506 338	522 154	414 644	302 550
Aerated waters .....	14 845	16 219	18 786	20 082	19 834	18 361
Apples, preserved (solid pack) .....	5 824	6 255	4 203	5 215	4 740	3 922
Bacon and ham .....	2 169	2 356	2 434	2 505	2 457	2 094
Bricks, blocks, etc. ....	56 378	66 682	65 893	64 116	59 665	63 154
Butter (a) .....	12 196	10 762	9 707	7 910	7 075	5 461
Cheese .....	12 387	13 332	13 156	13 903	17 494	15 431
Concrete, ready mixed .....	247 343	277 082	284 555	288 466	260 367	250 021
Electricity, total generated .....	6 095	6 008	6 842	7 179	7 748	7 903
Fertilisers—						
Sulphate of ammonia .....	54 701	23 040	12 291	5 292	6 045	1 213
Superphosphate .....	103 253	57 896	101 281	97 012	151 489	132 783
Flour .....	34 938	30 691	32 427	32 780	34 901	37 269
Paper, newsprint .....	196 240	206 228	206 590	207 621	208 143	221 460
Timber—						
Sawn, peeled or sliced (b)—						
Hardwood .....	388.3	349.7	330.9	299.3	289.2	n.y.a.
Softwood .....	21.8	23.8	37.3	39.3	31.3	n.y.a.
Dressed—						
Floorboards .....	58.6	49.7	45.4	37.2	28.1	n.y.a.
Weatherboards .....	2.6	2.2	0.4	0.3	0.4	n.y.a.
Other .....	59.7	60.4	90.0	69.3	65.6	n.y.a.
Woodchips, etc. (green weight) (c) ..	2 947	2 436	2 967	2 838	2 978	n.y.a.
Zinc, refined .....	152 749	137 637	170 685	161 173	204 623	191 683

(a) Includes butter equivalent of butter oil.

(b) Includes timber to be further processed.

(c) Defined in forestry section of Chapter 8.

### Manufacturing Censuses

Annual censuses of factories were conducted by the Bureau from almost the start of the present century; the last 'old style' factory census covered the year 1967-68. For 1968-69 simultaneous integrated economic censuses were undertaken in respect of manufacturing and

four other sectors (mining; wholesale trade; retail trade; and electricity and gas production and distribution).

The 1968-69 integrated economic censuses were fully described in Appendix A of the 1972 *Year Book* in which there also appears an explanation of the factors which made necessary the termination of 'old style' factory censuses and the start of a new series, based on new reporting units and data concepts. In the following section, the results of the manufacturing census for 1978-79 are given.

Definitions and data concepts applying to the integrated economic censuses will be found in the section 'Integrated Economic Censuses' in Chapter 18 of this edition. Also, results from manufacturing censuses are compared with those from integrated economic censuses covering other industry sectors in that section.

### Census Results

#### Manufacturing Establishments Classified According to Industry

The table that follows contains a summary of the principal manufacturing statistics by industry sub-division. Single establishment enterprises employing less than four employees at 30 June 1979 are excluded from this table:

**Manufacturing Establishments: Operations by Industry Sub-division, Tasmania 1978-79**

ASIC code (a)	Industry sub-division Description	Establish- ments operat- ing at 30 June	Employment (including working proprietors)— average over whole year			Wages and salaries	Turn- over
			Males	Females	Persons		
		no.	no.	no.	no.	\$'000	\$'000
21,22	Food, beverages and tobacco .....	119	4 118	1 890	6 008	50 382	355 515
23	Textiles .....	10	871	961	1 832	16 009	62 922
24	Clothing and footwear .....	6	78	141	219	1 525	4 809
25	Wood, wood products and furniture .....	159	3 394	229	3 623	33 597	169 106
26	Paper, paper products and printing .....	42	4 654	719	5 373	63 037	267 316
27	Chemical, petroleum and coal products .....	14	n.p.	n.p.	n.p.	n.p.	n.p.
28	Non-metallic mineral products .....	46	777	45	822	8 914	56 909
29	Basic metal products .....	9	n.p.	n.p.	n.p.	n.p.	n.p.
31	Fabricated metal products .....	72	1 322	203	1 525	13 518	54 129
32	Transport equipment .....	19	n.p.	n.p.	n.p.	n.p.	n.p.
33	Other industrial machinery and equipment and household appliances .....	37	861	105	966	8 482	22 240
34	Miscellaneous manufacturing .....	19	333	62	395	3 911	20 658
	Total manufacturing .....	552	21 386	4 680	26 066	266 099	1 401 463

**Manufacturing Establishments: Operations by Industry Sub-division, 1978-79—continued**

ASIC code (a)	Industry sub-division Description	Stocks		Purchases, transfers in and selected expenses	Value added	Rent leasing and hiring expenses (b)	Fixed capital expen- diture
		Opening	Closing				
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
21,22	Food, beverages and tobacco .....	48 174	51 663	267 612	91 393	3 269	8 037
23	Textiles .....	15 544	16 751	34 942	29 186	316	2 433
24	Clothing and footwear .....	217	308	2 116	2 784	46	47
25	Wood, wood products and furniture .....	33 088	31 733	96 062	71 689	1 013	7 675
26	Paper, paper products and printing .....	24 424	28 298	122 636	148 553	1 839	36 519
27	Chemical, petroleum and coal products .....	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
28	Non-metallic mineral products .....	6 378	6 718	38 894	18 355	278	3 185
29	Basic metal products .....	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
31	Fabricated metal products .....	7 471	8 660	32 081	23 237	702	353
32	Transport equipment .....	n.p.	n.p.	n.p.	n.p.	n.p.	n.p.
33	Other industrial machinery and equipment and household appliances .....	2 774	3 204	10 456	12 214	317	1 924
34	Miscellaneous manufacturing .....	5 327	4 430	10 800	8 960	234	970
	Total manufacturing .....	225 724	235 323	861 690	549 372	8 394	77 116

(a) Australian Standard Industrial Classification code.

(b) Outlay on fixed tangible assets less disposals.



## Manufacturing by Statistical Division

The next table shows, as a time series, the chief measures of manufacturing operations by statistical divisions:

Manufacturing Establishments: Main Items by Statistical Division (a)

Main items	Unit	Year ended June	Statistical divisions			Tasmania
			Hobart and Southern	Northern	Mersey-Lyell	
Number of establishments .....	no.	1977 1978 1979	241 230 213	228 219 192	148 150 147	617 599 552
Employment—(b)						
Males .....	no.	1977 1978 1979	9 068 8 844 8 394	7 334 6 741 6 628	6 650 6 437 6 364	23 052 22 022 21 386
Females .....	no.	1977 1978 1979	2 008 2 116 1 857	1 457 1 491 1 401	1 259 1 337 1 422	4 724 4 944 4 680
Persons .....	no.	1977 1978 1979	11 076 10 960 10 251	8 781 8 232 8 029	7 909 7 774 7 786	27 766 26 966 26 066
Wages and salaries .....	\$'000	1977 1978 1979	93 696 99 576 96 072	76 539 78 028 82 805	75 779 80 738 87 223	246 014 258 341 266 099
Value added (c) .....	\$'000	1977 1978 1979	207 731 186 851 188 015	156 999 160 402 172 354	168 558 150 727 189 003	533 288 497 979 549 372
Fixed capital expenditure .....	\$'000	1977 1978 1979	8 601 11 602 22 409	16 935 22 467 11 917	8 936 13 174 42 791	34 472 47 243 77 116

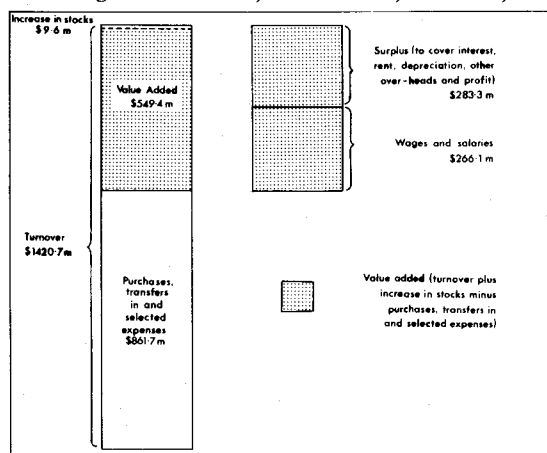
Data for 1977 are according to the 1969 edition of ASIC, while those for 1978 and 1979 are according to the 1978 edition of ASIC. In general the impact of the change is minimal at the ASIC division levels (i.e. total manufacturing). For a more detailed explanation see the ABS publication *Census of Manufacturing Establishments, Tasmania* (8202.6) for 1977-78 or 1978-79.

(a) Excludes details for single establishment enterprises employing less than four persons at 30 June.

(b) Includes working proprietors; figures are average over whole year.

(c) The method of calculating value added was changed slightly from 1978-79.

## Manufacturing Establishments, Value Added, Tasmania, 1978-79



### Tasmania in Comparison with Other Australian States

A comparison of Tasmanian manufacturing activity with that of the other Australian states and territories is shown in the following table. Applying the appropriate population relativity factors to the figures, it will be seen that, on the basis of the resulting values, Tasmania is relatively more industrialised than Queensland, Western Australia, the Northern Territory and the Australian Capital Territory and approaches the level of South Australia.

**Tasmania-Australia Comparison of Manufacturing Activity, 1978-79**

State or territory	Popula- tion relativity (a)	Estab- lish- ments	Wages and salaries	Turn- over (b)	Stocks at 30 June		Pur- chases, etc. (c)	Value added
					1978	1979		
ACTUAL VALUES								
N.S.W. ....	12.1	no. 9 803	\$m 4 689	\$m 20 650	\$m 3 183	\$m 3 560	\$m 12 353	\$m 8 675
Vic. ....	9.2	8 546	4 102	18 229	2 959	3 217	11 109	7 377
Qld. ....	5.2	2 886	1 125	6 591	748	867	4 388	2 322
S.A. ....	3.1	2 119	1 052	4 536	839	858	2 704	1 851
W.A. ....	3.0	2 202	671	3 499	512	510	2 176	1 322
Tasmania .....	1.0	552	266	1 401	226	235	862	549
N.T. ....	0.3	87	28	186	38	42	118	73
A.C.T. ....	0.5	117	34	119	12	11	57	61
Total Australia ..	34.5	26 312	11 966	55 211	8 515	9 300	33 765	22 230
VALUES RELATIVE TO POPULATION (d)								
N.S.W. ....	..	810	388	1 707	263	294	1 021	717
Vic. ....	..	929	446	1 981	322	350	1 208	802
Qld. ....	..	555	216	1 268	144	167	844	447
S.A. ....	..	684	339	1 463	271	277	872	597
W.A. ....	..	734	224	1 166	171	170	725	441
Tasmania .....	..	552	266	1 402	226	235	862	549
N.T. ....	..	290	93	620	127	140	393	243
A.C.T. ....	..	234	68	238	24	22	114	122
Total Australia .....	..	763	347	1 600	247	270	979	644

(a) Tasmania's total mean population for 1978-79 is expressed as 1.0; other state populations in proportion to 1.0.

(b) Sales, transfers out and other operating revenue.

(c) Purchases, transfers in and selected expenses.

(d) Figures are calculated by dividing the actual figures by the appropriate population relativity factor. They do not represent direct per head of population details but merely a comparison of the degree of manufacturing activity in each state relative to population.

### Tasmania-Australia Comparison

In 1978-79 the Tasmanian share of Australian employment in manufacturing was 2.28 per cent; and of Australian 'value added' in manufacturing 2.47 per cent. (Tasmania's mean population as a proportion of Australia's for 1978-79 was 2.90 per cent.)

### CENSUSES OF ELECTRICITY AND GAS ESTABLISHMENTS

Until 1968-69 factory production statistics contained details for Class XVI (Heat, Light and Power); in the 'old style' annual factory censuses, of which the last covered 1967-68, this class was confined to the *production* of electricity and gas and such operations were treated as a particular type of factory activity. For 1968-69 simultaneous economic censuses were undertaken in respect of electricity and gas production and distribution and four other sectors (manufacturing; retail trade; wholesale trade; and mining). Details relating to the 1968-69 census of electricity and gas establishments are included in the 1973 *Year Book*; results from censuses conducted for 1969-70 and 1971-72 may be found in the 1974 and 1977 editions of the *Year Book*, respectively. Details from the 1974-75 and 1977-78 censuses for Tasmania cannot be released because of confidentiality restrictions.

## THE TASMANIAN ELECTRICITY GENERATING SYSTEM

### Introduction

Until 1971 Tasmania was unique among Australian states in that its electric power system was based almost entirely on hydro-electric installations, but in 1971 a thermal oil-fired station commenced operations at Bell Bay opening a new phase in the development of the generating system. Other Australian states rely principally on thermal plants while hydro-electric power, if available, is used only to supplement the basic supply. The Snowy Mountains Hydro-Electric Scheme, which feeds power to the Victorian and N.S.W. grids, is not designed to cope with the base load demand in these states, its essential function being to provide the extra power necessary to meet peak loads, and also to supply water for irrigation purposes. The Tasmanian system, despite its lower installed generator capacity, produces more power than the Snowy Scheme. The total installed generator capacity of the Tasmanian electricity generating system at the end of 1980 was almost 1.8 million kW. Of this, 86 per cent (over 1.5 million kW) was contributed by an integrated hydro-electric network. The 240 000 kW oil-fired station at Bell Bay is available for use as required.

### Early Development and Current Generating Capacity

Hydro-electric power for public use was first introduced in 1895 with construction of the 450 kW *Duck Reach* station on the South Esk River near Launceston. This was a purely municipal supply and work on Tasmania's state-wide system did not begin until 1911 with the exploitation of the Great Lake catchment waters and diversion of the Ouse and Shannon Rivers.

The concentration on water as a source of power in Tasmania has resulted in the need to follow a policy of water conservation to regulate the high winter and spring run-off. Emphasis in the power developments has been on the creation of large storages and successive use of the impounded waters (e.g. water from Lake St Clair may pass through eight power stations before reaching the tidal waters of the Derwent River at New Norfolk).

By May 1916 *Waddamana 'A'* station (7 000 kW), the first stage of the Great Lake scheme, was commissioned. *Shannon* station was opened in 1934 and in 1944 the third stage of the scheme, *Waddamana 'B'* station (48 000 kW) commenced generation. When *Poatina* station was commissioned in 1964, the *Waddamana 'A'* and *Shannon* stations were closed down, *Waddamana 'B'* being retained only for emergency and peak-load generation.

The following table outlines the current status of the Tasmanian generating system:

Tasmanian Power Generating System

Station	Year of first generator commission	Static head (metres)	Generator capacity (kW)
COMPLETED STATIONS AS AT 30 JUNE 1980			
Tarraleah .....	1938	299	90 000
Waddamana 'B' (a) .....	1944	344	48 000
Butlers Gorge .....	1951	56	12 200
King Island .....	1951	(b)	1 409
Tungatinah .....	1953	306	125 000
Trevallyn .....	1955	126	80 000
Lake Echo .....	1956	173	32 400
Wayatinah .....	1957	62	38 250
Liapootah .....	1960	110	83 700
Catagunya .....	1962	43	48 000
Poatina .....	1964	829	300 000
Tods Corner .....	1966	41	1 600
Meadowbank .....	1967	29	40 000
Cluny .....	1968	16	17 000
Repulse .....	1968	27	28 000
Rowallan .....	1968	49	10 450
Flinders Island .....	1968	(b)	400
Lemonthyme .....	1969	159	51 000
Devils Gate .....	1969	68	60 000

## Tasmanian Power Generating System—continued

Station	Year of first generator commission	Static head (metres)	Generator capacity (kW)
COMPLETED STATIONS AS AT 30 JUNE 1980—continued			
Wilmot .....	1971	251	30 600
Bell Bay .....	1971	(c)	240 000
Cethana .....	1971	99	85 000
Paloona .....	1972	31	28 000
Fisher .....	1973	649	43 200
Gordon (Stage 1) .....	1978	200	288 000
Total .....	..	..	1 782 209
STATIONS UNDER CONSTRUCTION			
Mackintosh .....	1981	68	72 000
Rosebery .....	1983	63	76 500
Pieman .....	1986	93	270 000
Total .....	..	..	418 500

(a) Reserve plant only.

(b) Diesel generators.

(c) Thermal oil-fired station; the second generator was installed in 1974.

## Completed Schemes

*Tarraleah-Butlers Gorge*

The Tarraleah development, with headwaters regulated by raising Lake St Clair (1937) and the man-made Lake King William (1949), was commenced in 1934 and first generated power in 1938. The capacity of *Tarraleah* was progressively expanded to 90 000 kW in 1951 when the station was completed with the installation of a sixth generator; *Butlers Gorge* station (12 200 kW) commenced generation on the completion of the Clark Dam in 1951.

*Tungatinah-Lake Echo*

Built to regulate run-off from the extensive area between Great Lake and Lake St Clair, the 32 400 kW *Lake Echo* and 125 000 kW *Tungatinah* stations were commissioned in 1953 and 1956, respectively.

*Great Lake-South Esk*

The *Poatina* station (300 000 kW), the largest station in the Tasmanian hydro-electric system, had been developed to a capacity of 250 000 kW by 1965. The station utilises the waters of Great Lake which have been diverted into the South Esk River system. A sixth generator of 50 000 kW capacity was commissioned in 1977 bringing the total installed capacity of the station to 300 000 kW. The *Poatina* tailrace discharges into the South Esk River which feeds the run-of-the-river *Trevallyn* station (80 000 kW) located near Launceston.

*Derwent River Power Developments*

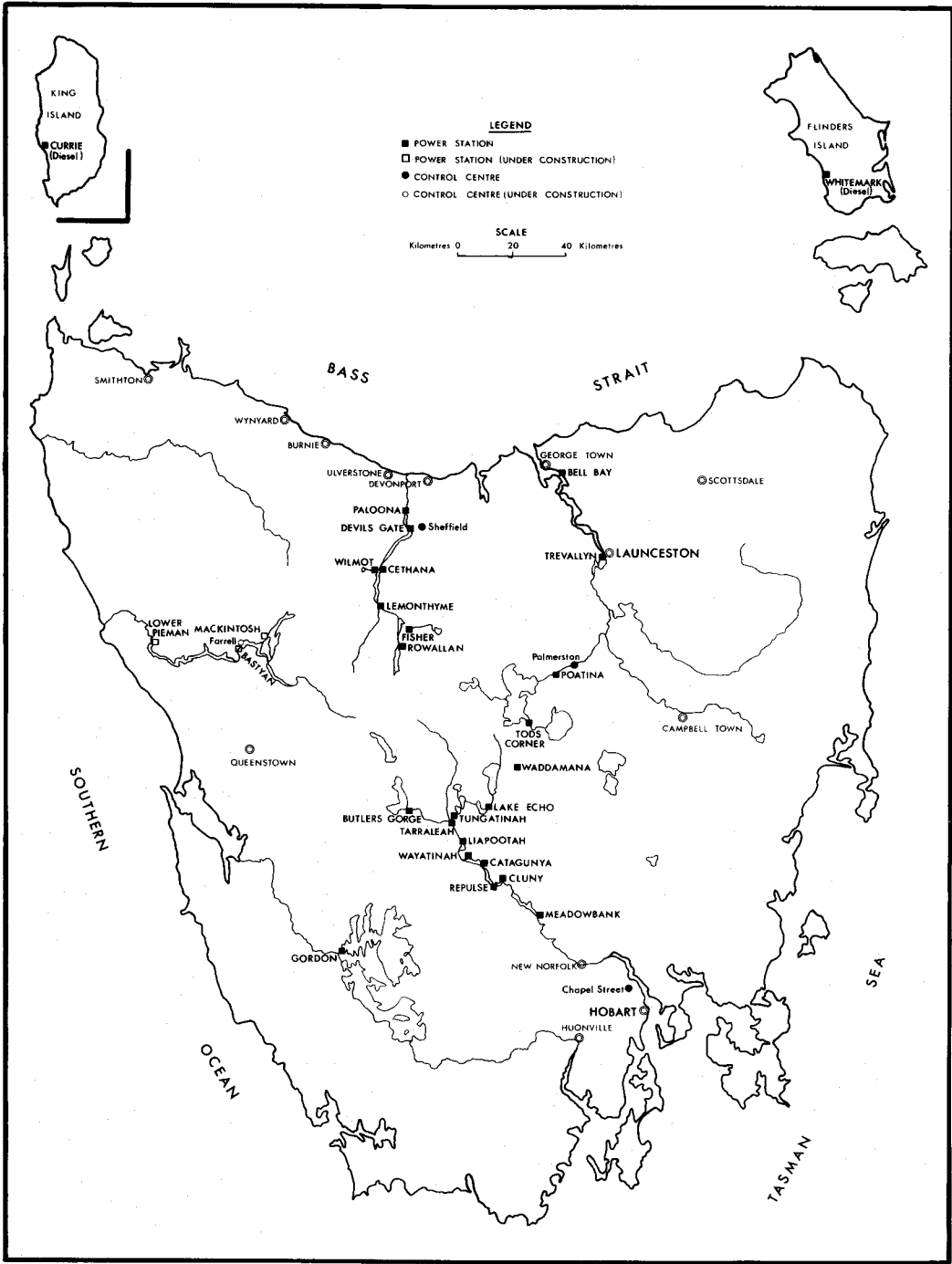
Two systems in the middle and lower Derwent River utilise the waters of the Derwent and its major tributaries, the Nive and Florentine. In the middle Derwent system the *Wayatinah* station (38 250 kW) was completed in 1957, followed by the 83 700 kW *Liapootah* station (1960) and the 48 000 kW *Catagunya* station (1962). The lower Derwent stations *Meadowbank* (40 000 kW), *Cluny* (17 000 kW) and *Repulse* (28 000 kW) were completed during 1967 and 1968.

*The Mersey-Forth Scheme*

Construction of the Mersey-Forth development in north-western Tasmania was completed in 1973. Four rivers, the Fisher, Mersey, Wilmot and Forth, have been utilised by a combination of seven power stations and seven large dams. The power stations are *Rowallan* (10 450 kW), *Lemonthyme* (51 000 kW), *Devils Gate* (60 000 kW), *Wilmot* (30 600 kW), *Cethana* (85 000 kW) and *Paloona* (28 000 kW) and *Fisher* (43 200 kW).

Manufacturing and Energy

The Tasmanian Generating System

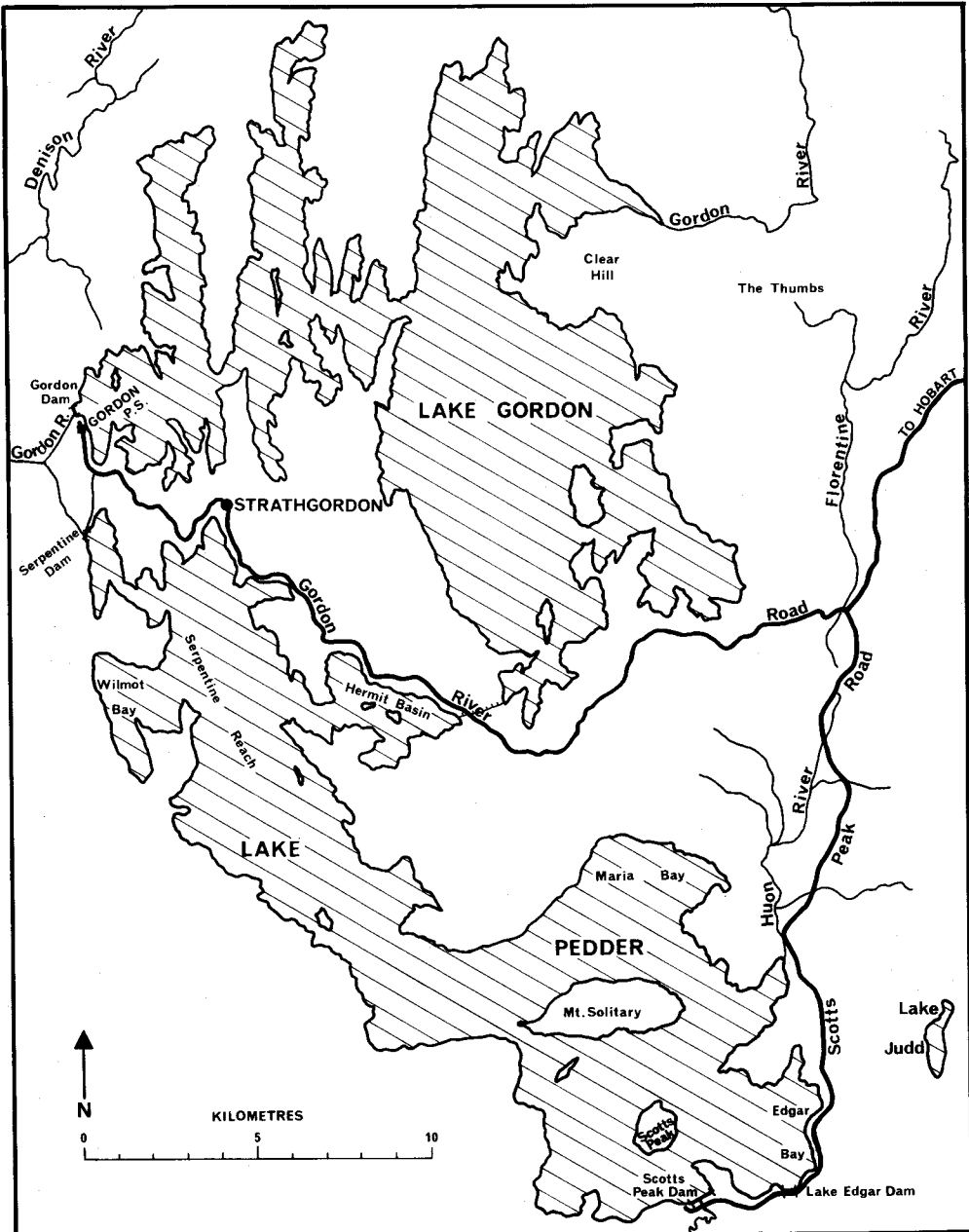


All seven power stations are designed for fully automatic operation and are remotely controlled from a centre near Sheffield.

### Bell Bay Thermal Station

This station accommodates two oil-fired steam driven generators with a total capacity of 240 000 kW. Installation of the second turbo-generator was completed in 1974.

Gordon River Development—Stage 1



*Gordon River Power Development—Stage 1*

This development, completed in 1978, has created the largest fresh-water storage in Australia, six times the volume of the Great Lake, and three times the volume of Lake Eucumbene, the largest lake in the Snowy Mountains Hydro-Electric Authority Scheme.

The Gordon River Power Development comprises two lakes with a total surface area of about 510 sq km, joined by the McPartlan Pass Canal. Lake Gordon (1974) was created by a 140-metre high dam on the Gordon River; three dams, one on the Serpentine River (1971) and two on the Huon River (1972), created the greatly enlarged Lake Pedder which has now become an important tourist attraction. During the 1979-80 summer alone, an estimated 70 000 people visited the Lakes Pedder and Gordon region.

From Lake Gordon water is carried by a vertical shaft to the power station, 186 metres underground. Access to the Gordon Power Station is via busbar and lift shaft or by road tunnel. The station is operated by remote control from Hobart, 161 kilometres away.

Initially, only two generators have been installed in the Gordon Power Station, each with a generating capacity of 144 000 kW. Three additional generators of 144 000 kW each are to be installed progressively as peak load demands increase, giving a final, total generating capacity of 720 000 kW for this station. The sustained generating capacity of the Gordon River Power Development, Stage 1 will be only a fraction of its total (peak load) capacity. It is estimated that the scheme should be able to sustain an average loading of about 168 000 kW during years of normal rainfall to produce an average output of 1 472 million kW.h of electricity per annum (i.e. the sustainable average load will be only about 23 per cent of the final installed generator capacity of 720 000 kW).

An accompanying map shows Stage 1 of the Gordon River power development.

**Present Developments***Pieman River Power Development*

In a report presented to Parliament on 21 October 1970, the Hydro-Electric Commission announced a power development in the Pieman River catchment area on the West Coast. The total capital cost was estimated at \$134 million (1970), the total installed capacity at 418 500 kW, and the eventual average output at 1 770 million kilowatt hours per annum. Construction work commenced in 1973 and completion of the scheme is expected by 1986. The estimated final capital cost had risen to \$440 million by mid-1978, largely due to the high rates of inflation and wage increases experienced since 1970.

**Location:** The Pieman River flows from the confluence of the Murchison and Mackintosh Rivers, entering the sea below Corinna (see map). The catchment area of 2 678 square kilometres is mostly rugged, mountainous Crown land, experiencing annual rainfall between 2 300 mm and 3 560 mm. Only 2 per cent (62 square kilometres) of the catchment area will be inundated.

**Power Stations:** The development will comprise three elements each including a power station:

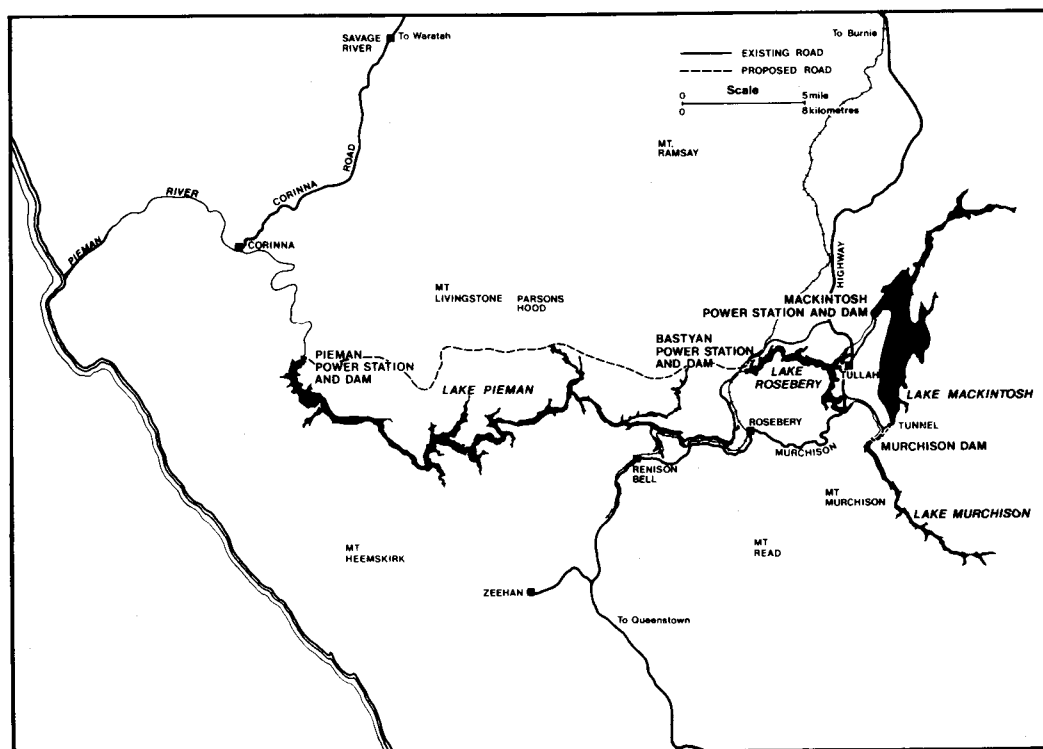
(i) *Mackintosh.* This scheme will include a dam over 91 metres high on the Murchison River; a 2 072 metres long tunnel from Lake Murchison to Lake Mackintosh; a dam 76 metres high on the Mackintosh River about three kilometres downstream from the Sophia River junction and the subsidiary Tullibardine Dam (24 metres high) together creating the main storage of the entire development; and a 72 000 kW power station below the Mackintosh Dam through which the combined flows of the Mackintosh and Murchison Rivers will pass.

(ii) *Bastyan.* Will include: a dam about 73 metres high, located on the Pieman River upstream from the Rosebery township, creating a lake extending up the Mackintosh River to the Mackintosh Power Station and up the Murchison River to just downstream from the Murchison Dam; a power station immediately below the Bastyan Dam (installed capacity 76 500 kW); the relocation of two kilometres of the Murchison Highway including new bridges over the Murchison and Mackintosh Rivers; and the relocation of about three kilometres of the Emu Bay Railway, including a new bridge over the Pieman River.

(iii) *Pieman.* Will comprise: a dam about 119 metres high located on the Pieman River immediately upstream from its junction with Stringer Creek; a subsidiary dam 15 metres high; a 270 000 kW power station, located at the junction with Stringer Creek; and a main access road, the Pieman Road, 54 kilometres long, from the Murchison Highway to the dam site, about 10 kilometres upstream from Corinna.



## Pieman River Development



## Proposed Future Developments

In October 1979, the Hydro-Electric Commission presented its *Report on the Gordon River Power Development, Stage Two* to the Premier. The Report, which recommended an integrated development of the Lower Gordon, Franklin and King Rivers as being the best method for meeting the State's future increased electricity demand, is summarised in the 1980 *Year Book* (pp.256-272). Subsequent developments up to November 1980 are summarised later in this chapter under the heading 'Tasmania's Next Major Power Development'.

## Growth of the Electricity Generating System

The following table shows the growth of the integrated system (i.e. excluding King and Flinders Islands) in recent years:

Hydro-Electric Commission, Tasmania, Integrated System: Operating Statistics (a)

Year	Output		Installed generating capacity (b)	Peak loading	
	Unit generated	Increase over previous year		Load	Increase over previous year
	million kW.h	per cent	kW	kW	per cent
1974.....	5 994	2.5	1 318 400	917 300	2.9
1975.....	5 773	-3.7	1 462 400	891 500	-2.8
1976.....	6 373	10.4	1 492 400	992 100	11.3
1977.....	6 931	8.8	1 636 400	1 050 800	5.9
1978.....	7 357	6.1	1 780 400	1 159 200	10.3
1979.....	7 702	4.7	1 780 400	1 151 400	-0.7

Hydro-Electric Commission, Tasmania, Integrated System: Operating Statistics (a)—continued

Year	Hydro system av. capacity without thermal generation	Total system av. capacity with maximum thermal generation	Average loading		Annual load factor (c)
			Load	Increase over previous year	
	kW	kW	kW		per cent
1974.....	666 000	733 000	684 236	2.5	74.6
1975.....	666 000	802 000	659 020	-3.7	73.9
1976.....	666 000	802 000	725 543	10.1	73.1
1977.....	666 000	802 000	791 205	9.1	75.3
1978.....	854 000	1 033 000	839 880	6.2	72.5
1979.....	854 000	1 033 000	879 224	4.7	76.4

(a) Excludes King and Flinders Islands.

(b) At 31 December.

(c) Average annual loading as a percentage of annual peak loading.

### Energy Output

The average annual energy output which can be expected over the life of the hydro part of the system is called the *assessed long term average hydro energy output*. It is a measure of the annual energy which can be supplied on average over several decades and is based on simulating the operation of the system using river flow information recorded over the past 50 years. However, it may not be possible to supply this energy at all times because of inadequate supply of water to the power stations during dry periods. The maximum annual energy output which can be maintained by the hydro part of the system at all times under the full range of catchment yields is referred to as the *hydro system average capacity (without thermal generation)*. Use of the thermal generating station allows load commitments to be made to levels in excess of those which can be supplied by the hydro part of the system and the maximum annual energy output which can be maintained by the total system is referred to as the *total system average capacity (with maximum thermal generation)*. Total loads in excess of this figure cannot be supplied by the system except over the short term and then only providing that there is adequate energy held in storage initially.

### Load Factor

The installed generating capacity is necessarily much higher than the peak loading since some generating plant must be held in reserve against the possibility of breakdown. Also, reliability varies according to the state of the water storages.

The sustainable average annual loading bears little relation to the total installed generating capacity. Prior to the commissioning of the first 144 000 kW generator in the Gordon Power Station in January 1978, hydro-electric power generation in Tasmania was running well in excess of that sustainable by long-term water yields, despite an installed generating capacity well above peak loads. As mentioned earlier, the total generating capacity of the Gordon River Development, Stage 1 is eventually to be increased to 720 000 kW to cope with peak loads. However, this Scheme's estimated sustainable average loading during years of normal rainfall is only 168 000 kW, 23 per cent of planned total generating capacity.

A power system must be designed to meet both the peak loading (the demand component) and the average loading (the energy component). Peak loading tends to represent high demand for relatively short periods, i.e. it has relatively little energy associated with it. The obvious design and operational problem is to create sufficient capacity to meet peak loading and, at the same time, to encourage the use of power so that the highest possible average loading is obtained. The cheapest system from the consumer's point of view, will be the one with the highest load factor. By world standards, the load factors in the previous table indicate a high standard of design and operational efficiency.

### The Hydro-Electric Commission

The Hydro-Electric Commission is an autonomous statutory authority, largely responsible for the conduct of its own affairs, with the 'Minister Administering the Hydro-Electric Commission Act' answerable to Parliament for the activities of the Commission. In

other words, the Commission is envisaged as a trading or business organisation. The purpose of the legislation that created it was to remove it from day-to-day political control. The power exerted by Parliament is mainly financial, not over the ordinary revenue and expenditure of the authority, but over the supply of loan moneys for new capital works.

Two other restrictions on the Commission can be listed: (i) it cannot change its tariff charges for the supply of electricity to consumers except with the approval of the Governor-in-Council; and (ii) in certain of its dealings, such as in real estate, the Commission must obtain the approval of the Minister.

The status of the Commission was described thus by the High Court of Australia in a judgment delivered in 1950: 'In the eye of the law the corporation is its own master and is answerable as fully as any other person or corporation. It is not the Crown and has none of the immunities or privileges of the Crown. Its servants are not civil servants and its property is not Crown property.'

### *Organisation*

Under the Commission, with its full-time Commissioner and three part-time Associate Commissioners, there are five branches:

(i) *Civil Engineering Branch*: Responsible for: survey of water resources; design and construction of all civil works involved in power development and allied projects.

(ii) *Electrical Engineering Branch*: Responsible for: studies of load growth and system development; design and construction of all electrical engineering works in conjunction with the Civil Engineering Branch.

(iii) *Power Branch*: Responsible for: operation and maintenance of completed power developments; generation and transmission of power in bulk.

(iv) *Distribution Branch*: Responsible for: distribution of electricity to consumers; operation and maintenance of the distribution system; inspection of installations and equipment; consumer advisory activities; sale of electrical appliances; licensing of wiremen and contractors.

(v) *Secretarial*: Responsible for: general administrative business of the Commission with subsections dealing with accounts, law, public relations, personnel, transport, stores and purchasing, medical services, central records and other services.

## **Technical Details**

### *Generation*

The total installed generator capacity of the Commission's 25 power stations was 1 780 400 kW in mid-1980. All stations generate alternating current at a frequency of 50 cycles per second. The power is stepped up at each station to the voltage required for transmission.

### *Transmission*

Power is conveyed from the power stations by 220 000, 110 000 or 88 000 volt transmission lines to major sub-stations at various load centres. All power stations (except those on King and Flinders Islands) and major sub-stations are linked into a grid system, thereby increasing the reliability of supply to all parts of the State.

### *Distribution*

Power is distributed from the major sub-stations by a network of 44 000, 33 000, 22 000, 11 000 and 6 600 volt feeder lines from which power is stepped down at zone sub-stations to a lower feeder voltage and/or finally, at distribution sub-stations, to 415/240 volts for supply to individual consumers. Some consumers take supply at feeder voltage.

Bruny Island is connected to the main power supply by a submarine cable; King and Flinders Islands are partly supplied by diesel-generation stations operated by the Commission at Currie and Whitemark, respectively.

### *Retail Distribution*

In the early days of the Commission's operation, consumers of electric power received it from three sources: from municipalities with their own generating capacity; from municipalities retailing power bought from the Commission; and from the Commission direct. Gradually, uniformity was achieved, municipalities stopped generating and retailing and the

one authority became the sole supplier, both of bulk power to industry and retail power to homes, shops, businesses, etc. One effect has been uniformity in tariff charges for retail power so that the farmer on the most remote holding is charged no more than dwellers in the principal cities. Tasmania has achieved an Australian record figure for distribution of electric power—it is estimated that nearly 99 per cent of homes and farms are now connected. Tariff charges are also lower than for any other state.

### Finances of the Hydro-Electric Commission

The table that follows shows the Commission's income and expenditure for recent years:

**Hydro-Electric Commission, Tasmania: Income and Expenditure**  
(\$'000)

Particulars	1975-76	1976-77	1977-78	1978-79
<b>INCOME</b>				
Sales—Bulk .....	24 380	28 814	31 899	37 833
Retail .....	45 443	50 079	59 216	56 885
Other income .....	2 876	1 479	4 404	3 650
<b>Total .....</b>	<b>72 699</b>	<b>80 372</b>	<b>95 519</b>	<b>109 131</b>
<b>EXPENDITURE</b>				
Operation, distribution, administration ..	27 871	30 593	33 484	37 272
Interest on loans and reserves .....	37 552	44 239	50 387	56 885
Less interest capitalised .....	-10 040	-14 378	-9 763	-7 943
Depreciation provision .....	6 184	6 297	7 454	8 333
Superannuation contribution and retire- ment benefits .....	5 784	7 572	9 548	9 077
Contribution to consolidated revenue ..	1 712	1 604	585	1 401
Fuel cost equalisation provision .....	2 000	3 000	2 000	2 000
Other expenditure .....	1 249	1 364	1 574	1 904
Net profit or loss .....	387	81	250	202
<b>Total .....</b>	<b>72 699</b>	<b>80 372</b>	<b>95 519</b>	<b>109 131</b>

### Sales and Prices of Electric Power

The following table shows comparative average prices for electric power in Australia:

**Average Price of Electric Power: Tasmania and Other States, 1978-79 (a)**  
(Cents per Kilowatt Hour)

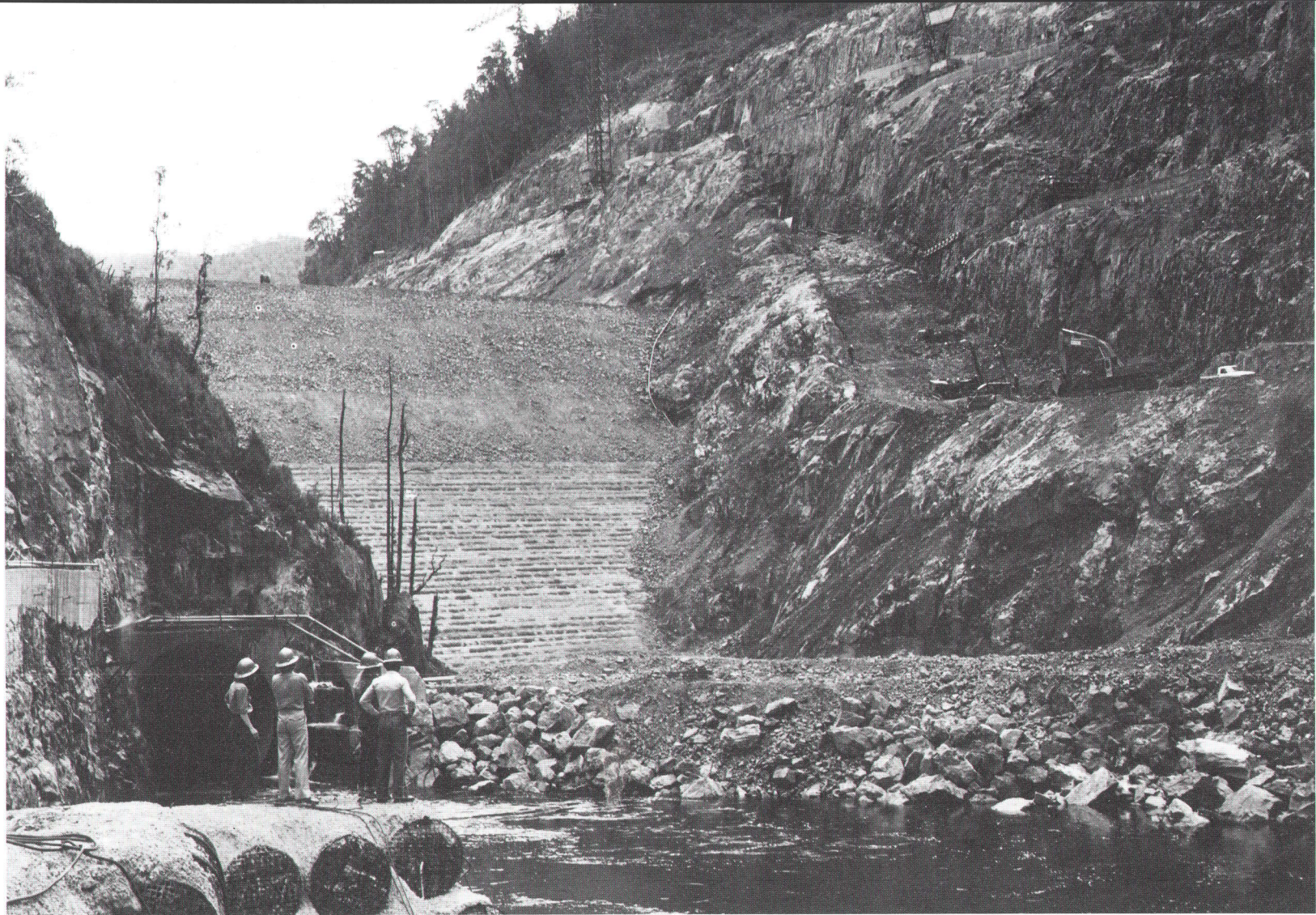
State or territory	Residential sales	Commercial sales	Industrial sales	Average all sales (b)
New South Wales .....	3.27	(c)	(c)	3.37
Victoria .....	3.56	5.57	2.99	3.78
Queensland .....	4.15	6.19	3.49	4.37
South Australia .....	3.06	4.53	2.71	3.32
Western Australia .....	5.14	(c)	(c)	5.03
<b>Tasmania .....</b>	<b>2.77</b>	<b>4.72</b>	<b>1.06</b>	<b>1.51</b>
A.C.T. ....	2.40	(c)	(c)	2.84
Northern Territory .....	4.38	5.69	n.a.	5.44
<b>Average .....</b>	<b>3.50</b>	<b>n.a.</b>	<b>n.a.</b>	<b>3.51</b>

(a) Source: 'Statistics of the Electricity Supply Industry in Australia' (published by the Electricity Supply Association of Australia).

(b) Includes power for traction, public lighting, etc., not specified in first three columns.

(c) Not recorded separately.

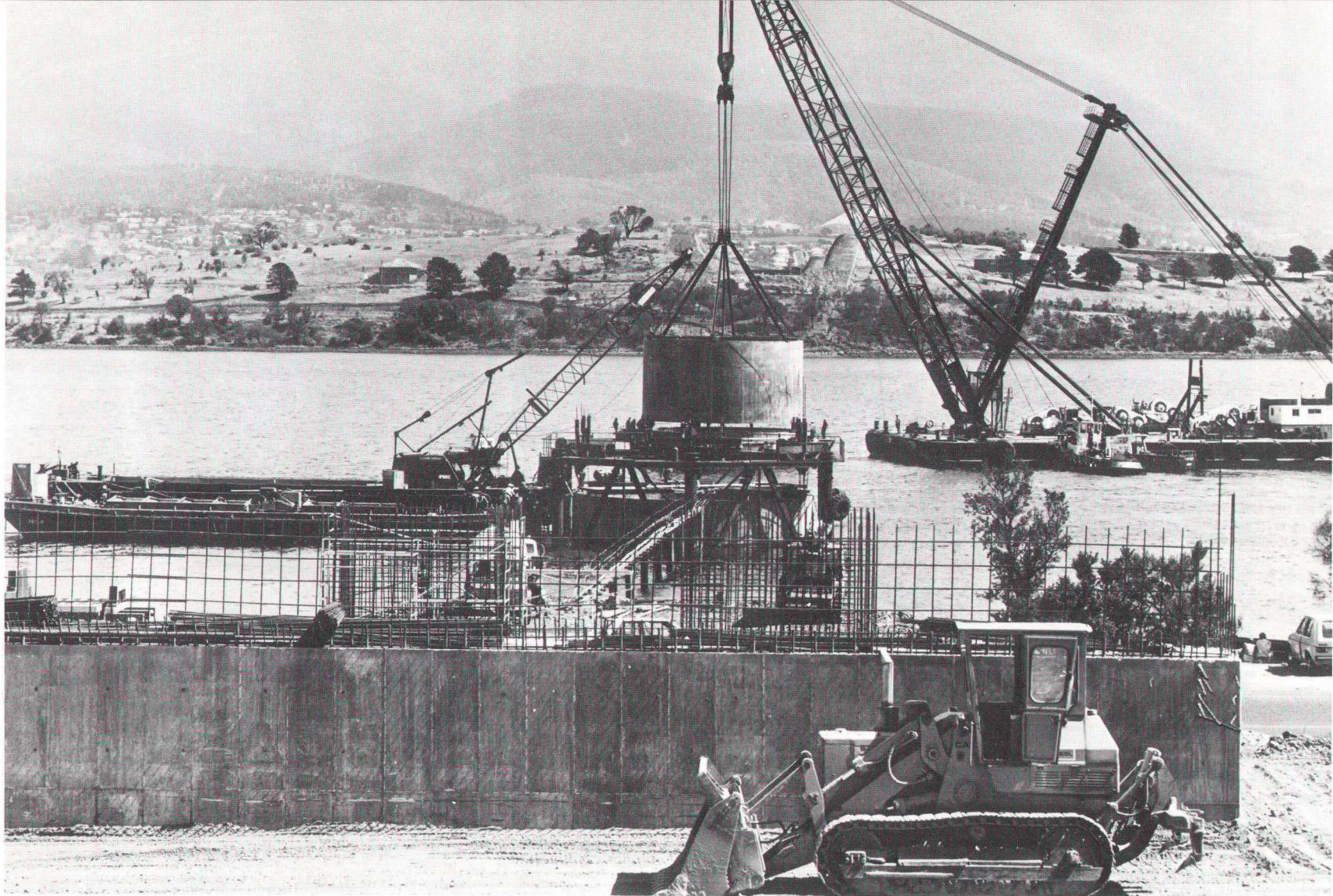




Murchison Dam under construction, Pieman River Power Development

*[Tasmanian Film Corporation]*





Positioning of a coffer dam—Bowen Bridge construction, Hobart. The completed pier caissons (constructed inside the coffer dams) are designed to resist impact from a wide range of vessels at their operating speeds.

*[Tasmanian Film Corporation]*



The Tasmanian average is the *lowest* and the householder pays less per unit (kW.h) on the average than his counterparts in other states. In 1978-79, the average rate charged to residential users of electricity in Tasmania was significantly less than that for any other state and 21 per cent below the average for Australia. The average rate charged for all sales of electricity in Tasmania in 1978-79 was 57 per cent lower than that for Australia. The economy of hydro-electric generation can be best obtained by comparing the prices charged to industrial users.

The following table shows the amount of electric power sold in Australia during 1978-79:

**Sales of Electric Power: Tasmania and Other States, 1978-79 (a)**  
(Million Kilowatt Hours)

State or territory	Residential sales	Commercial sales	Industrial sales	Total sales (b)
New South Wales .....	11 096	(c) 14 413		26 110
Victoria .....	7 216	3 382	6 182	17 202
Queensland .....	3 735	1 814	3 114	8 723
South Australia .....	2 461	1 120	2 089	5 713
Western Australia .....	1 510	(c) 2 538		4 085
<b>Tasmania .....</b>	<b>1 429</b>	<b>178</b>	<b>5 340</b>	<b>6 991</b>
A.C.T. ....	696	(c) 576		1 300
Northern Territory .....	121	274	n.a.	395
<b>Total .....</b>	<b>28 264</b>	<b>(c) 41 020</b>		<b>70 519</b>

(a) Source: 'Statistics of the Electricity Supply Industry in Australia' (published by the Electricity Supply Association of Australia).

(b) Includes power for traction, public lighting, etc., not specified in first three columns.

(c) Not recorded separately.

## TASMANIA'S NEXT MAJOR POWER DEVELOPMENT

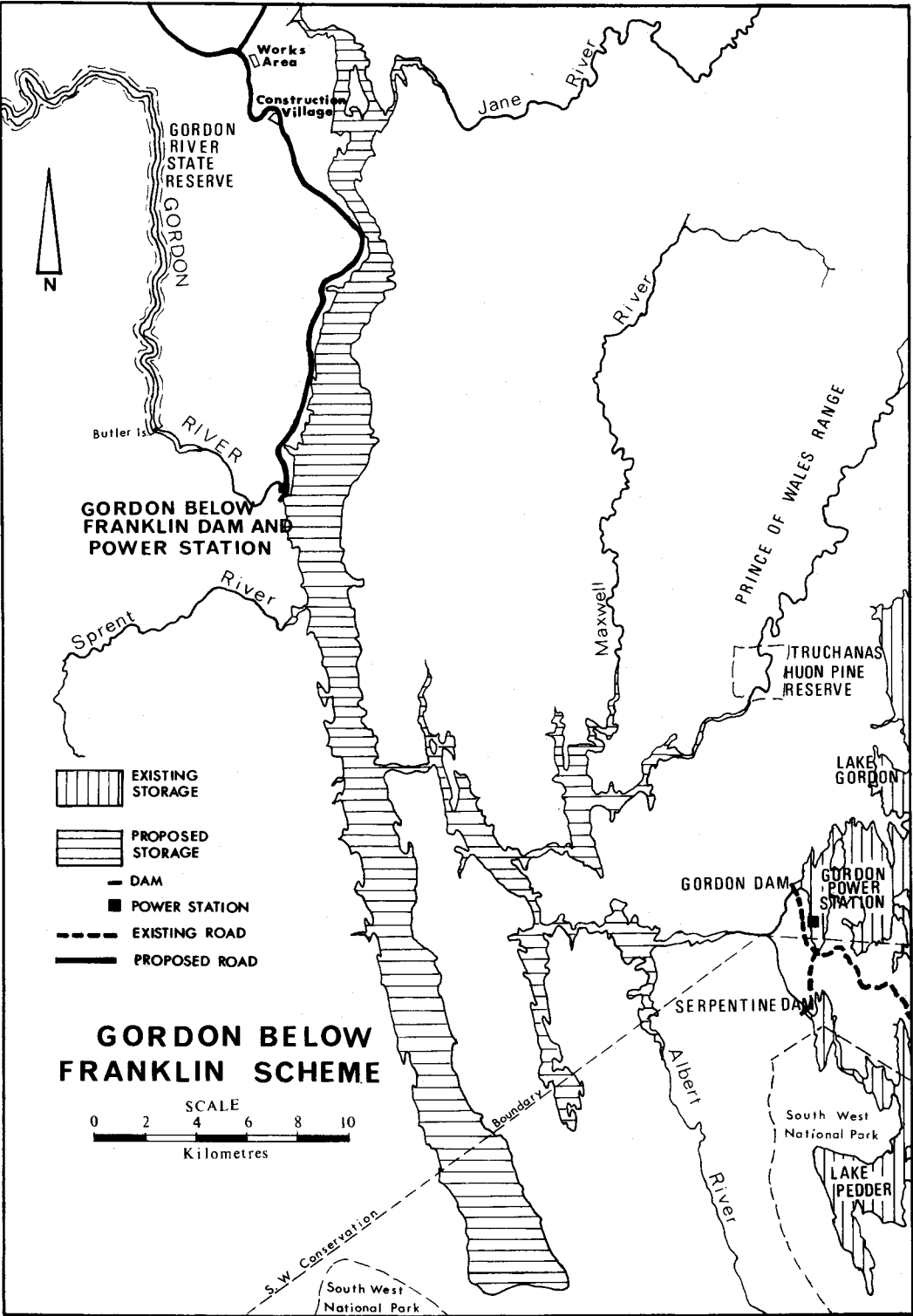
### The Hydro-Electric Commission's Main Report

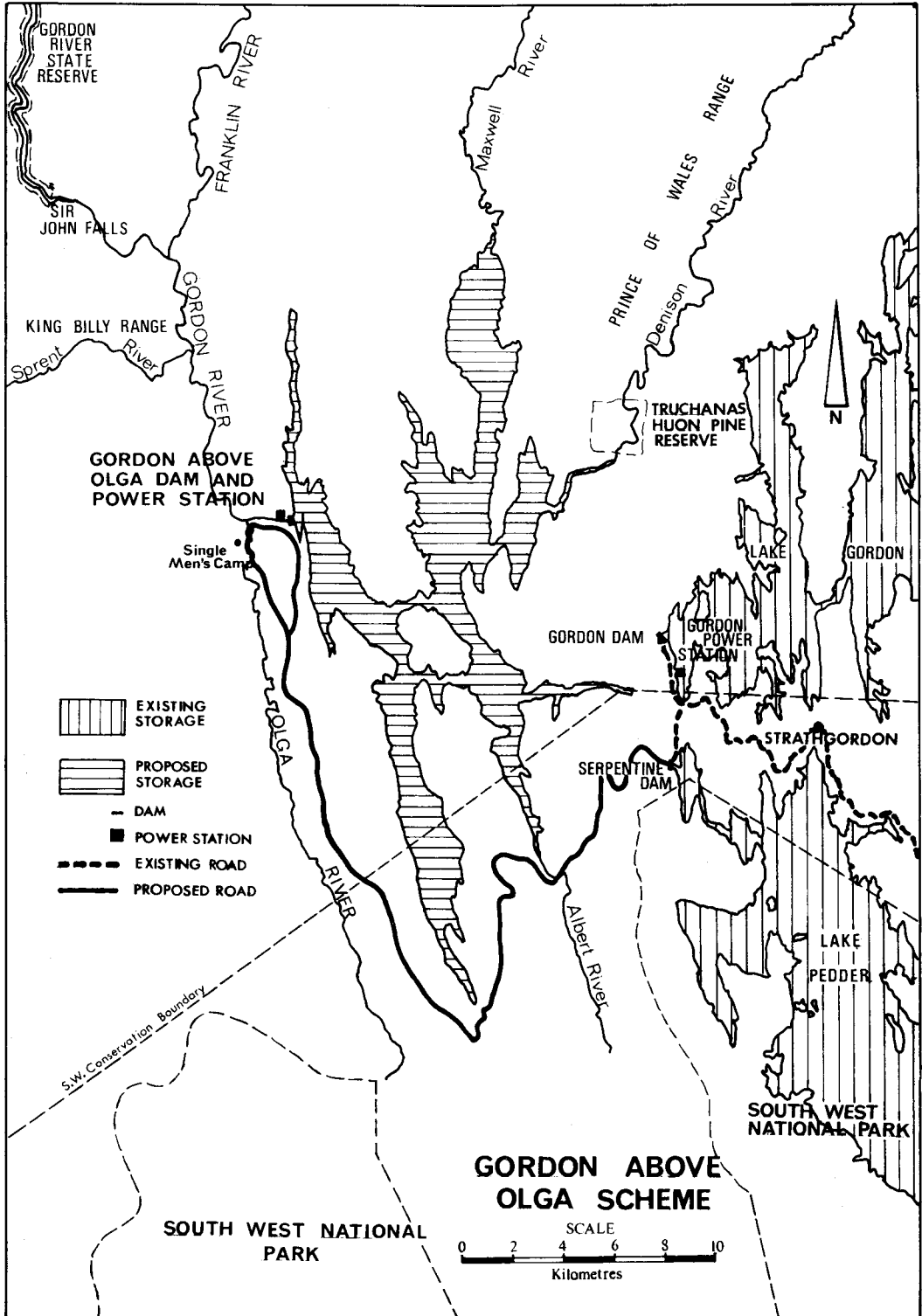
On 16 October 1979, the Tasmanian Hydro-Electric Commission's (HEC) 91-page *Report on the Gordon River Power Development, Stage Two*, together with eight separate appendices and 28 source documents (totalling over 2 000 pages) was tabled in State Parliament. The Report, which was based on research spread over several years, was on alternative sources of energy that could be used to meet increases in Tasmania's electricity demand up to the year 2000.

A summary of the HEC Report is included in the 1980 edition of the *Year Book* (pp. 256-272). The Report recommended that the State's future increases in electricity demand at least up to the year 2000 be met by an integrated hydro-electric development of the Lower Gordon, Franklin and King Rivers. It also recommended that Parliament approve construction of the first stage of this 'Integrated Development'—the Gordon River Power Development, Stage Two, known as the 'Gordon below Franklin Scheme'. (The second stage, the Franklin Scheme with King River Diversion, would not be required until some years after commissioning of the first stage.

When the HEC's Report was tabled, the Premier, Mr. Lowe, announced that a comprehensive program of public debate on it would start immediately. A co-ordination committee had been established to receive public comment and advice from Government departments and authorities until 25 January 1980. This committee was to make a report summarising the comments it received by 15 March 1980. By the same date, the Director of Environmental Control was to present his final advice on the environmental impact statement and related matters. The HEC would then prepare and present its final report, incorporating any refinements made desirable in light of Government advice and public comment. This was to be completed in April 1980 after which a Joint Parliamentary Committee would be established to give formal consideration to the proposal and make a final recommendation to Parliament. However, on 3 April 1980, the Premier announced that the plans to have a Joint Select Committee of Parliament inquire into the proposed Lower Gordon Scheme and other alternatives had been abandoned. Subsequently, the Legislative Council decided to form its own Select Committee to inquire into and report on the matter.







### The Co-ordination Committee Report

The Co-ordination Committee on Future Power Development released its Report to the Premier on 2 June 1980. The Committee had comprised the Director of Energy (Chairman), the Director-General of Lands, the Director of Environmental Control and the Development Officer of the Department of Planning and Development. Views were sought from other interested departments and authorities and the Committee, through the Directorate of Energy, also acted as a clearing house for receipt and consideration of public comment. The Committee's brief was to co-ordinate consideration of the HEC's Report on future power development and to supervise research and analysis into matters related to that Report.

The Co-ordination Committee Report recommended 'that the next stage of power development in Tasmania should proceed with the construction of a 200 MW coal-fired power station'. It was the view of all Committee members, apart from the Director of Environmental Control, that 'construction of a thermal station is the only means by which the expected power demand in the mid-1980s can be met, given the time constraints on the hydro alternative'. It was also their view that 'a second phase of power development, in addition to the commissioning of the abovementioned coal-fired station, will be required and should be brought on-line during the early/mid 1990s'. They recommended hydro-electric development in preference to a further thermal scheme for this second phase 'for reasons of economic efficiency and the socio-economic benefits to Tasmania flowing from such development'.

Further recommendations of the Co-ordination Committee were: (i) that the Directorate of Energy be directed to prepare a detailed energy conservation program; (ii) that the Department of Planning and Development be directed to prepare a comprehensive industrial development strategy integrated with a State energy policy; and (iii) that a special committee be formed to review current electricity pricing policy.

The following were included as attachments to the Co-ordination Committee's Report: (i) Report by the Directorate of Energy; (ii) Assessment by The Department of the Environment; (iii) Departmental Submissions; and (iv) Summary of Public Comment. Parts of the Directorate of Energy Report's 'Summary and Conclusions' are reproduced below:

'This Report concludes that additional electricity generating capacity is urgently required and that the first phase of future power development should commence, as soon as possible, with the construction of a coal-fired thermal station . . .'

'As regards the demand for electricity, it is the view of the Directorate that the Hydro-Electric Commission has made insufficient allowance for growth in electricity demand during the 1980s and particular concern is expressed about the very real possibility of insufficient generating capacity being available in the latter half of the decade. The Directorate's alternative demand projections, which make specific provision for energy conservation, reveal that the Commission's projections in respect of the General Load are reasonable. However, it is considered that the Commission has understated the potential demand in the major industrial sector. The Commission has provided for only 200 MW average to be made available to existing industry over 20 years and has made no provision whatsoever for new industry. Indeed, the Commission itself asserts that if this provision ' . . . is not to be exceeded there must be some restriction of industrial expansion in the State'.

'The Directorate has made marginally greater provision for industrial demand but its projections are nevertheless still considered to be conservative, in that they also take no account of the demands of any new industry. The Directorate, therefore, does not believe that industry and jobs, particularly potential new jobs, should be put at risk by endorsement of a proposal—i.e., that submitted by the HEC—which, through time constraints on its construction, may clearly be unable to meet the requirements of the present decade.

'It is against this background that the Directorate considers it imperative that a 200 MW coal-fired thermal station be commissioned by 1985 . . .'

'The Directorate further considers that additional generating capacity, beyond the commissioning of a single 200 MW thermal unit, will be required to come on-line during the mid 1990s and, in this context, favours further hydro development because of its clear superiority in terms of energy costs . . .'

'Environmental considerations aside, the Gordon below Franklin Scheme is clearly the best such option on economic grounds.

'However, were Government to judge that environmental considerations should rule out any development that would involve the flooding of the Franklin River, other options are available. Such options would need to be subject to the normal processes of Government decision-making, including environmental impact studies, but those available include the Gordon above Olga, Huon, King and Arthur Schemes. Of these, the Gordon above Olga would seem to be the most attractive . . .'

'It is considered that construction of the hydro option for Phase II of the suggested program—Phase I being the thermal station required to meet the situation in the 1980s—would need to commence during the period 1982 to 1985, so as to permit commissioning in the early/mid nineties . . .'

### **The Hydro-Electric Commission's Second Report**

On 7 July 1980, the HEC released a three-volume, 140-page report as a response to submissions from Government departments on its recommendations for a Lower Gordon and Franklin River scheme. In this report, the HEC strongly reiterated the recommendations made in its October 1979 main Report. The Report said that the HEC had been unable to find any rational basis for the Directorate of Energy's assumption that a new coal-fired thermal station could be brought into commercial service by 1985 and that a minimum period of eight years would be required for investigation, design, construction and commissioning of such a station. Furthermore, it was stated that recent rises in the cost of coal and an increase in the assessed output of the proposed Gordon below Franklin Scheme had eroded the feasibility of a thermal station. It said that a coal-fired thermal station would immediately boost consumer power charges by 35 per cent and be an irresponsible gamble until sufficient Tasmanian coal reserves were proved. A Gordon above Olga Scheme would be an inadequate alternative, could not be commissioned before 1992 at the earliest, would be environmentally more damaging and would produce only 119 MW compared with 180 MW average output from the Gordon below Franklin Scheme (which could be completed by 1989). The HEC said that all alternatives suggested by the Directorate of Energy would restrict industrial development in Tasmania compared with the Commission's recommendation.

### **The Government's Decision**

On 11 July 1980, the Parliamentary Labor Party decided to reject the HEC's recommendation for an integrated hydro-electric development of the Lower Gordon and Franklin Rivers, including the first phase—the Gordon below Franklin Scheme. Instead, it decided that the HEC was to construct the Gordon above Olga Scheme and a single-stage scheme on the King River, and examine a variety of other potential smaller schemes around the State. It was also decided that the Lower Gordon and Franklin Rivers would become part of a 'Wild Rivers National Park' and that the Davey River would be included in the South-West National Park. When announcing the decision, the Premier, Mr Lowe, said that legislation for the Gordon above Olga Scheme would be introduced in the 1980-81 Budget session of Parliament. It was also announced that the Bell Bay thermal power station would be converted from oil to coal burning by 1987, the level of Great Lake would be raised by increasing the height of the Miena Dam by six metres, the Pieman River power scheme would be accelerated so as to be completed by 1985 and that extensive energy conservation measures would be introduced. It was stated that the Government had sought a compromise which would satisfy as many sections of the community as possible. The estimated additional cost of the Gordon above Olga Scheme compared with the Gordon below Franklin Scheme was seen as the price Tasmanians must pay to protect a valuable wilderness region. It was considered that by the year 2000 alternatives to hydro development such as a Bass Strait cable could become feasible. Mr Lowe said this would mean that the Lower Gordon and Franklin rivers could be saved in perpetuity. However, later in July, the Premier said that a decision to flood the Franklin might have to be made in 25 to 30 years time.

### **The Hydro-Electric Commission's Third Report**

A 35-page report by the HEC, summarising what it saw as the major effects of the Government's decision rejecting the Commission's earlier recommendations, was tabled in Parliament on 11 November 1980. At the same time, a report by the Director of Energy

commenting on the HEC report and a report by the South-West Tasmania Committee advising the Government on the impact of its proposed Gordon above Olga/King River development were tabled. The Premier passed copies of each report to the Legislative Council Select Committee on Future Power Development.

In its report, the HEC said that no reasonable combination of hydro alternatives to the Gordon below Franklin Scheme could meet its forecast maximum load after 1990, and power rationing could therefore result. To eliminate that risk it might be necessary to supplement the Gordon above Olga/King Schemes with a new thermal station in the mid-1990s. It was emphasised that there were engineering and environmental problems with both the proposed King and Huon River schemes. Also, because of the time lapse since its first report a year ago, there was now doubt as to whether the Gordon above Olga Scheme could be completed by 1992.

On costs, the HEC calculated that to achieve a 180 MW output from the Gordon above Olga and King River Schemes would cost \$113m more than for the same output from the Gordon below Franklin Scheme, using June 1978 cost levels and a five per cent per year interest rate. (\$113m represents \$269 per man, woman and child resident in Tasmania as at 31 December 1979 (420 100); at an interest rate of 12 per cent p.a.—the HEC paid a rate in excess of this on its 1980 public loan raisings—the annual interest bill on \$113m amounts to \$32 per Tasmanian resident (as at 31 December 1979).) Applying a six per cent p.a. inflation rate and a 10 per cent p.a. interest rate, the HEC calculated that the additional capital cost at January 1980 cost levels would be \$315m. (This is equivalent to \$750 per Tasmanian resident (as at 31 December 1979); at an interest rate of 12 per cent p.a., the annual interest bill on \$315m is \$90 per Tasmanian resident (as at 31 December 1980).) Assuming a two-thirds increase in average household electricity consumption over the next 20 years, the HEC estimated that the Gordon above Olga/King Schemes would lead to an additional average increase of \$120 each year in household consumers' electricity bills at today's (1980) cost levels. The report said that the cost of electricity for sale at incremental costs to major industry would be 50 per cent higher for the Gordon above Olga/King Schemes compared with the Gordon below Franklin Scheme.

In his commentary on the HEC report, the Director of Energy, Mr N. C. K. Evers, strongly criticised a number of the claims made. He disagreed with the HEC claim that the proposed Gordon above Olga Scheme would not meet power needs after 1990. He said the HEC had not included the Henty/Anthony scheme in its calculations. He said that the latter scheme could be completed this decade and would provide 32 MW average output. Mr Evers also disputed the HEC claim that the Government's decision would mean that the average household consumer would pay an extra \$120 per year compared to the Gordon below Franklin alternative. Mr Evers stated that Directorate of Energy calculations indicated that the Government's decision would add only \$15 a year to the average household consumer's power bill in the 1990s.

#### **The South-West Tasmania Committee Report**

This Report was commissioned by the Premier on 13 November 1979. The Committee comprised: Mr R. J. Graham, (Chairman), who resigned on 8 September 1980 to take up a seat in the House of Assembly; Mr G. J. Foot, Launceston businessman and former MLC; and Mr B. W. Davis, a senior lecturer at the University of Tasmania and conservationist. The Committee's brief was to advise the Government on the impact on the South-West of the proposed Olga/King developments. The Report was tabled in Parliament on 11 November 1980. In the preface it was stated that one member of the Committee, Mr Foot, was out of the State from 12 July to 25 August 1980 and did not take part in many of the detailed discussions on which the Report is based. An interim report presented to the Premier in July 1980 was not made public at the time but was included as an appendix to the final report. In the interim report, Mr Foot dissented from the majority view of the Committee and supported the HEC's recommendation for a Gordon below Franklin Scheme.

According to the South-West Tasmania Committee Report, the HEC had grossly underestimated the likely effects of hydro development in the South-West. It said that visual impact, loss of wilderness values, increased risk of wild fires and modification of natural habitats can all occur as a result of the development of hydro projects. The Committee strongly recommended limiting public access to the new lake created by the Gordon above Olga Scheme. It said that the scheme chosen by the Government represented a substantial

intrusion into the South-West wilderness. Major modifications to the scheme were recommended to reduce its impact on the area.

### **Debate and Controversy**

From the release of the HEC's Main Report on 16 October 1979, the issue of Tasmania's next major power scheme engendered considerable debate and controversy reminiscent of that surrounding the decision in favour of the Gordon River Development, Stage 1 and the subsequent flooding of the original Lake Pedder.

Conservation groups such as the Tasmanian Wilderness Society and the Tasmanian Conservation Trust were strongly opposed to developments in the South-West. In early June 1980 the Hydro Employees Action Team (HEAT) was formed to promote and publicise the benefits of the HEC proposal to the State. At the beginning of July 1980, the National Parks and Wildlife Service, a State Government Department, conducted a major advertising and promotion campaign against the HEC's proposed scheme and called for the Lower Gordon and Franklin Rivers area to be proclaimed a Wild Rivers National Park. Many industry leaders, the Department of Planning and Development and the Queenstown Council were among those who supported the HEC's recommendation. (The Department of Planning and Development's assessment was that the HEC's projections of future electricity demand were far too low.) On 20 June 1980 the State Liberal Opposition announced that it would support the Gordon below Franklin Scheme recommended by the HEC.

Following the Government's decision for an Olga/King development announced on 11 July 1980, a group of pro hydro-electric power supporters formed the Association of Consumers of Electricity (ACE) on 30 July 1980 'to give the silent majority a voice in the power debate'. ACE was strongly in favour of the Gordon below Franklin Scheme and, following its foundation, a spokesman said that the Government's decision would mean 'we will get much less power and pay much more for it. We will pay in other more serious ways too, if we cannot supply Tasmanian industries with the energy they need in the future.' If ACE could not convince the Government to change its mind, it claimed the writing was on the wall for economic decline in Tasmania.

The Committee of ACE included Mr E. E. Reece, former Labor Premier (for 13½ years), Sir Angus Bethune, former Liberal Premier, and Sir Allan Knight, former HEC Commissioner; Mr R. Mather, MHA (Liberal Party) was a foundation member. Mr Reece, who was a predecessor of Mr Lowe, said that rejecting the Franklin Scheme was the gravest mistake by the Parliamentary Labor Party that he could remember.

On 11 August 1980, Mr R. F. Fagan, a former Labor Deputy-Premier from 1959-1969 and Minister for two years preceding his retirement in mid-1974, joined Mr Reece and Mr Bethune in a campaign against the Government's power development policy. They each signed a statement calling on the State Government to reconsider its decision to abandon the Gordon below Franklin Scheme in favour of a Gordon above Olga Scheme. They said the Government's decision posed a critical threat to the future of Tasmania and reflected a basic lack of understanding of the Tasmanian economy.

Considerable opposition to building coal-fired power stations within Tasmania was also voiced. Concern was also expressed as to the effects on the Tamar Valley of converting the Bell Bay oil-fired thermal power station to burning coal. The Liberal Opposition opposed such a conversion.

The whole debate was characterised by conflicting claims, counter claims, and accusations of error between different Government authorities, politicians, special interest groups and members of the public. On 13 November 1980, the Premier, Mr Lowe, introduced legislation to authorise the construction of the Gordon above Olga power scheme in the House of Assembly. The legislation set a ceiling of \$611m on construction costs—the HEC's estimated cost of the scheme at 1980 costs was \$543m. The bill was not expected to be debated in the Legislative Council until the report by the Legislative Council Select Committee on Future Power Development was tabled. That Report was expected to be completed before the end of 1980.

### **Current Power Shortages for New Industry**

On 19 November 1980, it was revealed by the State Government that a proposed \$50m industry that would have averted the likely imminent closure of the Electrona carbide plant

was turned away due to lack of power. Twelve months earlier, the HEC had turned down a request from the Temco plant at Bell Bay for an additional block of power. Thus, industrial expansion and new job creation in Tasmania was already being limited due to the lack of sufficient electricity generating capacity. The Minister for Economic Planning and Development, Mr Barnard, said that Tasmania would be unable to provide for any substantial electricity consuming industrial developments for the next 20 years without building thermal power stations. In its forward projections of the level of demand for electricity, the HEC had not allowed for any additional industrial developments for the next 20 years.

The proposed new industry involved the processing of carbide into other products by the German-based carbide company SKW. It would have involved the existing Electrona plant doubling its current output and construction of a \$50m plant by SKW which would process 30 000 tonnes of carbide per year. The new industry would have created between 200 and 300 new jobs. However, the plant would have required about 100 MW of electricity annually from 1982-83—only 20 MW was available. (Power could have been supplied from the Bell Bay oil-fired station, but the cost would be prohibitive.)

### CONSUMPTION OF PETROLEUM PRODUCTS

The following table shows that the overall consumption of petroleum products in Tasmania has been increasing in recent years. It will be of interest to gauge the extent to which demand in the future responds to higher prices following implementation of Australia's import parity policy. Should predictions by some economists of continuing inelastic demand prove correct, governments may have to resort to other policy measures, like rationing, to achieve the absolute reductions in total consumption from 1 March 1979 to which Australia is committed as a member country of the International Energy Agency.

It is significant that the consumption of heating oil has fallen by 56 per cent since 1976-77 following previous rapid growth, indicating that many consumers are switching to alternative energy sources for heating in response to rapidly increasing oil prices. Also, the consumption of fuel oil in Tasmania has shown a significant decline in recent years up to 1977-78. Such trends will undoubtedly continue as users of these fuels turn to cheaper alternatives such as electricity and coal. (The Goliath Portland Cement Co. Ltd at Railton converted from fuel oil to coal in February 1976. Associated Pulp and Paper Mills Ltd announced on 30 September 1980 that \$35m would be spent in converting the energy source for its Burnie plant from oil to a combination of coal, woodwaste and bark over the next two years. In October 1980, Wander Australia Pty Ltd announced that its plant at Quoiba would convert from oil to Fingal Valley coal from January 1981 at an estimated cost saving of \$300 000 per year). As a result, an increasing demand is being placed upon the State's limited coal reserves and the electricity generating system.

Consumption of Petroleum Products, Tasmania  
(Source: Department of National Development and Energy)

Product	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 (a)	1979-80
Aviation gasoline .....	3	4	4	million 4	litres 4	4	4	3
Motor spirit—								
Super .....	266	289	306	319	346	358	370	365
Standard .....	79	78	70	66	60	56	58	56
Total .....	345	367	376	385	406	414	428	421
Aviation turbine fuel .....	17	23	19	23	24	28	35	41
Lighting kerosine .....	8	9	11	10	10	9	8	6
Heating oil .....	44	54	64	68	79	73	67	44
Power kerosine .....	1	1	1	1	1	—	—	—
Automotive distillate—								
Inland .....	101	127	133	148	162	168	189	210
Bunkers .....	5	6	5	7	5	1	5	3
Total .....	106	133	138	155	167	169	193	213



**Consumption of Petroleum Products, Tasmania**  
(Source: Department of National Development and Energy)—*continued*

Product	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 (a)	1979-80
				million litres				
Industrial diesel fuel—								
Inland .....	51	59	52	98	68	80	45	38
Bunkers .....	64	44	33	41	47	36	24	31
Total .....	115	103	85	139	114	116	69	70
Fuel oil—								
Inland .....	335	328	306	(b)235	233	226	254	290
Bunkers .....	18	15	14	11	8	5	7	6
Total .....	354	343	320	246	242	231	261	296
Total volume of main products .....	993	1 036	1 018	1 031	1 047	1 044	1 066	1 095

**CONSUMPTION OF MOTOR SPIRIT PER HEAD OF MEAN POPULATION**  
(litres)

	876	924	935	948	992	1 005	1 030	1 002
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(a) Before January 1979 volumes were measured at 60°F. From that month a temperature of 15°C was used.

(b) Goliath Portland Cement Co. Ltd of Railton converted from fuel oil to coal on 11 February 1976.

The sudden jump in petrol prices during 1978-79 and 1979-80 is shown in the next table. The previous table indicates that this has started to have a significant impact on consumption. In 1979-80, for the first time in many years, both the total consumption and per capita consumption of motor spirit in Tasmania declined compared with the consumption levels in the previous year.

Responding to anticipated world fossil fuel shortages, the Federal Government announced, in August 1977, that Australia would progressively move towards import parity pricing for petroleum products. On 15 August 1978, the occasion of the 1978-79 Budget Speech, that program was accelerated with the immediate application of import prices to locally produced crude oil. These and subsequent world price rises are reflected in the petrol price index shown in the table below:

**Comparison of the 'Petrol' Expenditure C.P.I. Class with the All Groups Consumer Price Index, Six State Capital Cities, Australia (a)**

Expenditure class	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
'Petrol' (incl. super and standard) .....	152.4	175.0	182.9	199.2	244.9	332.6
All groups .....	171.1	193.3	220.0	241.0	260.7	287.2
Percentage increases (c)—						
'Petrol' (incl. super and standard) .....	15.5	14.8	4.5	8.9	22.9	35.8
All groups .....	16.7	13.0	13.8	9.5	8.2	10.2

(a) Weighted average of the six state capitals combined. Base year: 1966-67 = 100.0.

(b) Quarterly index numbers were: Sept. 1979, 301.2; Dec. 1979, 332.7; March 1980, 324.6; and June 1980, 371.8.

(c) Over previous year.

The 'Petrol' expenditure class accounted for 5.3 per cent of the all groups six state capitals Consumer Price Index number for the June quarter 1980.

The next table shows the 'Electricity, gas and fuels' group of the Price Index of Materials Used in Manufacturing Industry, Australia for recent years:

**Price Index of Materials Used in Manufacturing Industry, Australia: Electricity, Gas and Fuels Group**  
(Base: 1968-69 = 100.0)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Index number .....	179.5	229.0	254.8	291.0	362.4	554.6
Percentage increase (a) .....	42.2	27.6	11.3	14.2	24.5	53.0

(a) Over previous year.

*Proposed Ethanol Production*

On 28 October 1980, the Federal Minister for National Development and Energy, Senator Carrick, released details of a study into the development of an ethanol from sugar beet industry in Tasmania. The study, undertaken by the British firm, W.S. Atkins & Associates, had been commissioned by the Federal Government. It recommended the establishment of two \$28m ethanol production plants with a combined capacity to produce 75 million litres of ethanol a year from sugar beet. This would be sufficient to replace 15 per cent of the petrol used in Tasmania. A 15 per cent ethanol/85 per cent petrol blend could replace 'super' grade petrol in Tasmania. It was estimated that the pump prices of this fuel would be 37 cents per litre. Atkins estimated that 10 000 hectares of land could be made available for sugar beet production in northern Tasmania and that 5 500 ha of beet would need to be cultivated each year. It was estimated that establishment of the processing-plants would lead to the direct and indirect employment of about 1 500 people. The scheme would mean that expenditure outside the State for importing petrol would be reduced by over \$20m per year and this money spent within Tasmania.

On 1 December 1980, details of a report on the Atkins study by the Tasmanian Department of Agriculture were released. The Department of Agriculture had three major points of criticism of the Atkins study: (i) that the estimated area of land available for sugar beet production was too high; (ii) that the estimated yields of sugar beet that might be obtained were too high; and (iii) that the estimated return to farmers was too high. As a result, the Premier, Mr Lowe, and the Federal Minister for Administrative Services, Mr Newman, announced the appointment of a joint expert committee of Federal and State representatives to examine both the Atkins report and the Department of Agriculture's evaluation of it. That committee was to produce a report by March 1981. Mr Newman stated that, despite the problems, he remained confident that the industry would get off the ground and be supplying ethanol blend petrol to Tasmanian motorists by 1985.

**THE DIRECTORATE OF ENERGY AND ENERGY ADVISORY COUNCIL**

During 1979, the Tasmanian Government introduced new organisational arrangements with a view to streamlining procedures in the energy area and facilitating the provision of professional policy advice across the whole range of energy issues.

The Government established a Directorate of Energy, responsible directly to a Minister (currently the Premier), which commenced operations in March 1979. The Directorate was to remain a small policy unit but its resources were to be supplemented as required by secondment from other relevant authorities and by the engagement of outside consultants.

An Energy Advisory Council was established at the same time as the Directorate of Energy. The Council is chaired by the Director of Energy and, in addition, includes four Government appointees and four members from outside Government service. The Government appointees are the Commissioner, Hydro-Electric Commission; the Director of Mines; the Director of Environmental Control; and the Director-General of Planning and Development. The appointees from outside Government service are a trade unionist, a prominent industrialist, a coal expert of international repute and an academic with expertise and interests in the fields of electrical engineering, solar energy research and conservation.

The function of the Council is to work in tandem with the Directorate of Energy in the provision of policy advice on energy matters to the Government. The council is also seen as a principal vehicle for the evolution of energy policy that is broadly integrated with the Government's other socio-economic programs.

The Government also indicated a concern to ensure optimum public participation in the development of energy policy and, to this end, the Energy Advisory Council sets aside a major portion of each meeting for discussion with a particular interest group.

The principal activities of the Energy Advisory Council and the Directorate of Energy include consideration of matters relating to future power development, the preparation of energy policy guidelines, energy research (including consideration of alternative energy sources) and energy conservation in various contexts (including both conservation of liquid fuels and thermal insulation).

## Further References

*A.B.S. Publications Produced by the Tasmanian Office:*

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Census of Manufacturing Establishments, Summary of Operations by Industry Sub-division, (Preliminary) Australia (8201-0) (annual; 1978-79 released 15-4-80, 6 pp.).

Manufacturing Establishments, Summary of Operations by Industry Class (8202-0) (annual; 1978-79 released 11-6-80, 25 pp.).

Electricity and Gas Establishments, Details of Operations, Australia, States and Territories (8208-0) (irregular, 1974-75 and 1977-78 released 22-1-80, 7 pp.).

Manufacturing Commodities, Principal Materials Used (8210-0) (irregular 1974-75 released 27-4-78, 25 pp.).

Production Statistics: Australia (Preliminary) (8301-0) (monthly, October 1980 released 30-10-80, 2 pp.).

Manufacturing Commodities, Principal Articles Produced, Australia (8303-0) (annual, 1976-77 and 1977-78 released 5-6-80, 99 pp.).

Production Bulletins (monthly), Australia—

No. 1: Electricity, Gas and Electrical Appliances (8357-0) (August 1980 released 19-11-80, 11 pp.).

No. 2: Clothing and Footwear (8358-0) (August 1980 released 25-11-80, 13 pp.).

No. 3: Food, Drink and Tobacco (8359-0) (August 1980 released 12-11-80, 16 pp.).

No. 4: Textiles, Bedding and Floor Coverings (8360-0) (August 1980 released 21-11-80, 13 pp.).

No. 5: Building Materials and Fittings (8361-0) (August 1980 released 7-11-80, 8 pp.).

No. 6: Chemicals and By-Products (8362-0) (August 1980 released 10-11-80, 10 pp.).

No. 7: Motor Vehicles, Parts and Accessories (8363-0) (August 1980 released 29-10-80, 7 pp.).

No. 8: Miscellaneous Products (8364-0) (August 1980 released 12-11-80, 8 pp.).

Manufacturing Commodities, Selected Principal Articles Produced, Australia (Preliminary) (8365-0) (annual, 1977-78 released 9-10-79, 21 pp.).

*Other Publications:*

DEPARTMENT OF PLANNING AND DEVELOPMENT. *Tasmanian Manufacturers Directory* (biennial, Tasmanian Government Printer, Hobart).

HYDRO-ELECTRIC COMMISSION. *Report on the Gordon River Power Development, Stage Two*. (Hydro-Electric Commission, Hobart, 1979).

## Chapter 10

### TRADE AND DISTRIBUTION

#### OVERSEAS AND INTERSTATE TRADE

##### Historical

The *Statistical Returns of Van Diemen's Land* and the *Statistics of Tasmania* provide a continuous series of total trade statistics dating from 1824 to 1909. Until the foundation of the Commonwealth in 1901, trade with other parts of Australia was recorded as originating from or being destined for 'British Colonies'; in other words, all Tasmanian sea trade was regarded as overseas. From Federation to 1909, statistics were collected and compiled by the newly formed federal Customs Department for *all* sea trade, but since 1910 only direct *overseas* trade has been recorded by Australian Customs. In an island state, it became apparent that statistics of overseas trade alone were inadequate to record economic activity and, from 1922-23, the Government Statistician collected and published details of interstate trade. The collection of these data, now undertaken independently by the State Office of the Australian Bureau of Statistics, depends primarily on documents made available by Tasmanian port authorities and Australian Customs. In brief, there is a *total* trade series (1824-1909), an *overseas* trade series (1910 to 1921-22) and a *total* trade series (1922-23 to today).

In the immediate post-war period, there was a marked expansion of commercial aviation; the freight being carried was a component of interstate trade and steps were taken to record it, the first published figures appearing for 1949-50. Thus, the total trade of Tasmania is now recorded in three categories: by sea, overseas; by sea, interstate; by air, interstate.

##### Values of Trade from 1824

##### *Note on Currency*

The pre-Federation details were recorded in sterling; subsequent details were recorded in £A which had parity with sterling until 1930 when devaluation made £A1.25 equal to the £ sterling. In 1949 the £ sterling was devalued by 30.5 per cent and the £A was correspondingly devalued to preserve the 1930-1949 relativity. In 1966 Australia changed to decimal currency, with \$A equal to £A0.5. In late 1967, the £ sterling was devalued from an equivalency of \$A2.51 to \$A2.15. The \$A was devalued by approximately 2.25 per cent against the £ sterling in 1971. The exchange rate between the \$A and £ sterling is no longer fixed and from December 1971 the \$A has been quoted in terms of \$U.S. Later changes in the exchange rate appear in Chapter 12, Private Finance. In the tables in this section, pre-1966 recorded figures have been converted to \$A by simply doubling the originals, *irrespective of their year of occurrence*, and no account has been taken of changes in exchange rates. Post 1966 figures similarly have not been adjusted to take account of changes in exchange rates.

Due to considerable and persistent changes in the purchasing power of money, it is extremely difficult to satisfactorily interpret any long-term statistical series expressed in money terms. The following table is therefore of interest historically but subject to all the disabilities (including changes in the value of Australian currency) associated with long-term money series.

**Total Value of Trade by Sea and Air: Historical Summary, Tasmania**  
(\$'000)

Year	Value of imports				Value of exports			
	By sea		By air	Total	By sea		By air	Total
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
1824.....	n.a.	n.a.		124	n.a.	n.a.		30
1860.....	1 686	450		2 136	1 544	380		1 924
1880.....	738	2 000		2 738	1 568	1 456		3 024
1900.....	1 402	2 746		4 148	3 078	2 144		5 222
1910.....	1 662	(a)	n.a.	n.a.	1 040	(a)	n.a.	n.a.
1919-20.....	1 626	(a)		n.a.	4 022	(a)		n.a.
1929-30.....	3 668	16 028		19 696	4 978	13 198		18 176
1939-40.....	3 188	21 780		24 968	4 852	20 954		25 806
1949-50.....	18 704	51 218	(b)10 670	80 592	29 936	42 672	(b) 3 996	76 604
1959-60.....	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078
1969-70.....	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840
1977-78.....	115 778	594 793	39 388	749 960	381 942	594 441	38 206	1 014 589

(a) Collection discontinued for period 1910 to 1921-22.

(b) First collected in 1949-50.

**Definition of 'Overseas' and 'Interstate'**

Statistics of overseas trade of Tasmania include details of goods landed directly from overseas or shipped directly to overseas ports; and, in addition, details of goods transhipped through other Australian states, *provided that the overseas import or export document has been lodged with Customs in Tasmania*. Statistics of interstate trade include details of goods landed in or shipped from other Australian states; and, in addition, details of goods transhipped through other Australian states, *provided that the overseas import and export document has been lodged with Customs in another Australian state*.

By way of example, a new Japanese car transhipped in Melbourne and discharged in Tasmania is classified as an item of interstate trade. Victoria, not Japan, is classified as the place of origin, provided that the overseas import document has been lodged with Customs in Victoria.

**Effect of Motor Vehicles on Total Value of Imports and Exports**

Import and export details of motor cars and commercial vehicles include tourist vehicles entering and leaving the State. The following table shows details for recent years:

**Motor Cars and Commercial Vehicles (a): Value of Imports and Exports, Tasmania**  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Imports.....	64 943	75 231	98 110	104 305	112 172	125 017
Exports.....	28 537	28 997	32 524	34 854	36 654	41 427

(a) As well as new and used vehicles, includes business and tourist vehicles moving to and from the State.

Since Tasmania does not carry out motor vehicle assembly on any extensive scale (and certainly not for export), it follows that total import and export values for 1977-78 are both inflated by approximately \$41 m worth of vehicles, principally tourist, which entered and left the State. If vehicle exports are offset against imports, the net import figure will still include some used as well as new vehicles.

**Source of Trade Statistics**

Overseas trade statistics are compiled from documents obtained under the Federal Customs Act 1901 and supplied to the Australian Bureau of Statistics by the Australian Customs. Interstate sea trade statistics are compiled from documents required under the

authority of the *Marine Act* 1976 and made available to the Tasmanian Office of the A.B.S. by the various port authorities. Statistics of *interstate air* trade are compiled from returns furnished direct to the Tasmanian Office of the A.B.S. by all those who use this medium for the transportation of goods in commercial or industrial operations.

### Values

The cost of importing goods into any country will theoretically contain four elements: (i) the 'original' price at door of factory, warehouse, etc.; (ii) the cost of delivering goods to the ship 'free on board'; (iii) sea freight and associated charges between ports; and (iv) cost of delivery from port to buyer.

Trade statistics base values on the first two elements but exclude the third and fourth as set out in the following definitions:

*Overseas Exports:* Goods sold to overseas buyers before export are valued at the 'free-on-board' (f.o.b.) port of shipment equivalent of the actual price paid to the exporter. Goods shipped on consignment are valued at the f.o.b. port of shipment equivalent of the current price offering for similar goods of Tasmanian origin in the principal markets of the country to which they are despatched for sale.

*Overseas Imports:* The recorded value for overseas imports is the 'value for duty' as required for Customs purposes. On 1 July 1976 Australia adopted the internationally recognised Brussels Definition of Value on a f.o.b. basis (i.e. charges and expenses involved in delivering the goods from the place of exportation to the place of introduction in Tasmania, are excluded). The value for duty is based on the normal price (i.e. the price the goods would fetch at the time when duty becomes payable on a sale in the open market between a buyer and a seller independent of each other). In practice, the basis for valuation is generally taken to be the invoice price subject to certain safeguards and adjustments where necessary. This new basis of valuation differs from that used prior to July 1976 which, broadly, was based on the higher of actual selling price or current domestic value (in the country of export) plus charges involved in placing the goods free-on-board the vessel at the port of export. Because of the change in the basis of valuation the recorded overseas import figures from 1 July 1976 are not comparable with those for previous years. It is estimated that if the previous basis of valuation had continued, the value of total overseas imports would have been about 2 per cent higher than the recorded values on the new basis.

*Interstate Imports and Exports:* These are valued at the f.o.b. port of shipment equivalent of the actual price at which the goods were sold.

### Tasmanian Ports

Although there are seven port authorities (usually called marine boards) in Tasmania, overseas trade is restricted to the ports of Hobart, Launceston, Burnie, Devonport and Stanley. (Exports of iron ore from Port Latta are credited to Stanley and exports of woodchips from Spring Bay are credited to Hobart.) The names of ports in subsequent tables refer to the cities or towns in which the controlling port authorities are located. Thus 'Hobart' includes Port Huon, Spring Bay, Howden and Strahan, 'Launceston' includes Bell Bay, Inspection Head and Long Reach; 'Stanley' includes Port Latta; 'Currie' includes Naracoopa and Grassy; and 'Lady Barron' includes Whitemark.

This chapter deals only with the imports and exports passing through these ports. For a description of the major ports and for the financial operations of the port authorities, see Chapter 11.

### Total Trade of Tasmania

The following table shows Tasmanian total trade and its components in recent years. It will be observed that interstate trade is the major element both in imports and exports (but includes some goods transhipped through other Australian ports—see definitions above).

**Total Trade, Tasmania  
(\$'000)**

Year	Imports				Exports			
	By sea		By air	Total Imports	By sea		By air	Total exports
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate	
1972-73 .....	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247
1973-74 .....	69 277	357 805	24 760	451 843	259 745	404 382	34 566	698 692
1974-75 .....	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786
1975-76 .....	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251
1976-77 .....	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667
1977-78 .....	115 778	594 793	39 388	749 960	381 942	594 441	38 206	1 014 589

The next table shows the balance of trade (excess of exports over imports):

**Balance of Trade (Sea and Air), Tasmania**

Year	Balance of trade (excess of exports)		Year	Balance of trade (excess of exports)	
	Total (\$'000)	Per head of mean population (\$)		Total (\$'000)	Per head of mean population (\$)
1972-73 .....	214 102	543	1975-76 .....	120 610	297
1973-74 .....	246 850	621	1976-77 .....	169 905	415
1974-75 .....	108 239	269	1977-78 .....	264 629	642

**Overseas Trade by Sea**

Details of Tasmania's trade with overseas countries for the past six years are shown in the following table:

**Total Value of Trade by Sea With Overseas Countries, Tasmania  
(\$'000)**

Year	Value of imports from—				Value of exports to—			
	Japan	New Zealand	United States of America	Other Overseas Countries	Japan	United States of America	Malaysia	Other Overseas Countries
1972-73 .....	7 003	7 732	5 986	24 324	75 231	35 434	5 403	102 644
1973-74 .....	12 462	8 252	8 930	39 633	104 880	46 819	4 738	103 308
1974-75 .....	12 931	10 865	14 718	62 102	99 549	33 257	8 115	93 348
1975-76 .....	11 836	10 182	10 039	44 205	110 670	34 339	5 340	100 231
1976-77 .....	15 721	9 497	13 631	55 774	148 191	43 593	14 389	132 484
1977-78 .....	17 627	12 802	18 103	67 246	155 385	48 488	30 595	147 474

In 1977-78 the United States of America was Tasmania's major overseas supplier of imports, followed by Japan and New Zealand.

*Trade with Selected Countries*

The principal countries of origin, together with values (in \$m) for overseas imports shipped direct to Tasmania in 1977-78 were: United States of America, 18.1; Japan, 17.6; New Zealand, 12.8; United Kingdom, 12.7; Canada, 12.2; and the Federal Republic of



Germany, 6.4. The principal countries of destination for overseas exports shipped direct from Tasmania (value in \$m) were: Japan, 155.4; United States of America, 48.5; Malaysia, 30.6; Indonesia, 18.4; Singapore, 16.4; and Thailand, 10.1.

The following table shows the trade of Tasmania with selected overseas countries; countries selected are those for which imports or exports exceeded \$1m in any one of the three years under review, with the exception of countries for which figures are confidential. It should be noted that some goods are received from, or sent to, overseas countries by transhipment through other Australian states; no data are available on such transactions.

Trade With Overseas Countries, Tasmania  
(\$'000)

Country of Origin or Destination	Imports			Exports		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
Belgium-Luxembourg	119	231	341	5 012	6 964	4 047
Canada	8 131	9 229	12 225	185	993	1 746
China—Excl. Taiwan Province	98	145	235	3 507	2 093	7 367
Taiwan Province only	1 503	2 888	3 635	5 370	7 799	9 337
Egypt, Arab Republic of	—	—	—	140	164	2 224
Finland	97	12	122	479	582	1 176
France	823	1 549	1 221	3 692	4 439	5 362
German Dem. Republic	2	1	1	1 436	3 949	19
Germany, Federal Republic of	5 218	2 829	6 363	3 281	3 685	6 445
Greece	1	8	—	116	1 413	126
Hong Kong	2 444	2 723	1 518	5 550	6 472	6 315
India	22	110	308	3 326	12 421	6 139
Indonesia	5	11	13	12 112	15 414	18 395
Iran	—	906	—	701	1 284	5 524
Italy	1 048	3 859	2 534	3 261	4 035	2 560
Japan	11 836	15 721	17 627	110 670	148 191	155 385
Korea, Republic of	90	2	17	716	741	2 263
Malaysia	60	82	1 363	5 340	14 389	30 594
Netherlands	548	804	1 431	4 522	4 046	2 423
New Zealand	10 182	9 497	12 802	3 497	4 827	4 819
Nigeria	—	n.p.	—	—	—	1 200
Norway	642	1 270	1 301	378	420	1 106
Papua New Guinea	1	196	1 987	637	929	1 848
Philippines	13	82	97	3 329	4 019	4 708
Poland	27	61	75	1 971	4 978	4 103
Singapore	109	1617	1 076	3 184	3 329	16 381
South Africa, Republic of	563	2 487	598	833	506	43
Sweden	3 206	1 512	3 844	1 163	1 682	1 862
Thailand	34	189	416	8 852	11 983	10 053
United Kingdom	8 612	9 253	12 671	11 026	12 144	8 840
U.S.A.	10 039	13 631	18 103	34 339	43 593	48 488
U.S.S.R.	—	17	42	4 049	3 494	4 296
Venezuela	—	3 295	—	—	15	8
Yugoslavia	16	37	5	579	1 503	969
Other countries	10 690	10 339	13 219	6 583	6 157	5 771
'For orders' (a)	—	—	—	23	—	—
Unknown	—	—	—	721	4	—
Australia (re-imported)	83	29	588	—	—	—
Total	76 262	94 622	115 778	250 580	338 657	381 942

(a) Country of consignment not determined at time of export.

### Tasmanian and Australian Overseas Trade

The following table compares Australia's total overseas imports and exports with the corresponding values for Tasmania; by using a per capita comparison, certain conclusions can be drawn about the relative importance of Tasmania's overseas exports bearing in mind that Tasmania's figures are understated (and the remaining states correspondingly inflated) in respect of transshipments not recorded as *overseas* trade for Tasmania.





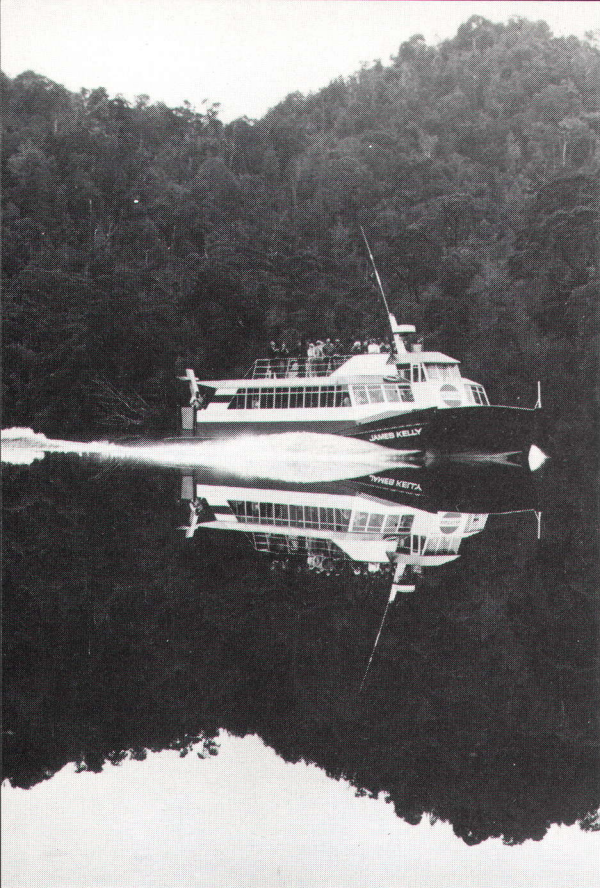
The *Denison Star* on the Gordon River

[Tasmanian Film Corporation]

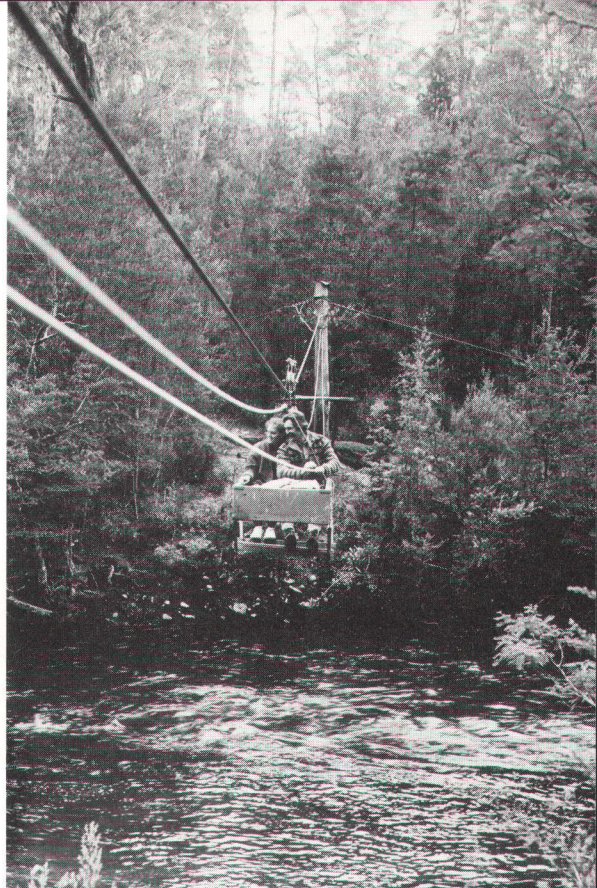
View from Colville Cottage, Battery Point, with the spire of St Georges Church in the background.







The *James Kelly* on the Gordon River



Crossing the Franklin River by flying fox

[*Tasmanian Film  
Corporation*]



The State Government's new  
Computer Centre, Hobart



## Value of Overseas Trade: Tasmania and Australia

Particulars		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
IMPORTS							
Australia—Total .....	\$'000	4 120 727	6 085 004	8 079 853	8 240 593	10 410 644	11 166 553
Per head .....	\$	314.5	451.1	590.0	595.2	744.1	788.5
Tasmania—Total .....	\$'000	45 045	69 277	100 616	76 262	94 622	115 778
Per head .....	\$	114.3	174.4	250.2	187.7	231.3	280.9
EXPORTS							
Australia—Total .....	\$'000	6 213 704	6 914 395	8 725 774	9 639 584	11 651 591	12 269 530
Per head .....	\$	474.4	512.6	637.1	696.2	832.7	866.4
Tasmania—Total .....	\$'000	218 712	259 745	226 154	250 580	338 657	381 942
Per head .....	\$	555.1	653.8	562.4	616.9	827.8	926.8

The relatively low value of overseas imports per head of Tasmania's mean population is due largely to the transshipment of goods in other Australian ports. Since some goods go overseas from Tasmania by transhipment and are therefore *not* recorded as Tasmanian overseas exports, the export comparisons *per head* of Australian and Tasmanian mean populations suggest that the State plays an important role as an earner of export income for Australia.

## Interstate Trade by Air

No data are compiled to show state of origin or state of destination for trade by air; most planes carrying commercial freight to and from Tasmania take off from, or land in, Victoria. The following is a summary of Tasmania's air trade for recent years:

Value of Interstate Air Trade, Tasmania  
(\$'000)

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Imports .....	21 238	24 760	26 850	27 882	30 909	39 388
Exports .....	30 626	34 566	31 699	36 280	35 160	38 206
Total .....	51 864	59 327	58 550	64 162	66 069	77 594

## Interstate Trade by Sea

As might be expected with Melbourne being the closest major port to Tasmania, the bulk of the island's interstate trade is transacted with Victoria. The next table shows the value of interstate sea trade with other Australian states. Imports include the value of some goods imported into other states from overseas and transhipped to Tasmania; exports include the value of some goods exported to other states for transshipment overseas.

Value of Interstate Sea Trade, Tasmania  
(\$'000)

Australian state or territory of origin or destination	Imports			Exports		
	1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
New South Wales .....	80 158	71 526	74 795	150 890	161 279	181 332
Victoria .....	331 290	386 466	407 754	247 707	282 374	358 466
Queensland .....	(a) 35 118	(a) 42 193	(a) 39 870	14 076	13 960	18 443
South Australia .....	55 922	62 402	70 672	24 625	22 603	25 529
Western Australia .....	1 009	1 644	1 701	4 057	5 595	10 575
Northern Territory .....	n.p.	n.p.	n.p.	36	39	97
Total .....	503 497	564 231	594 793	441 391	485 850	594 441

(a) Includes the value of manganese ore imported from the Northern Territory. Details are not available for separate publication.

## Sea Trade of Tasmanian Ports

In the following table, the total value of interstate and overseas imports and exports by sea is shown for each port:

Total Value of Sea Trade Classified According to Port, Tasmania  
(\$'000)

Port	Imports		Exports		Total sea trade	
	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Burnie .....	83 989	91 135	206 735	252 254	290 724	343 389
Devonport .....	118 702	108 732	107 529	170 928	226 230	279 660
Hobart .....	240 175	281 732	250 528	253 326	490 702	535 058
Currie .....	5 565	5 802	26 970	35 488	32 535	41 290
Launceston .....	206 327	220 441	181 636	211 903	387 963	432 344
Stanley .....	4 010	2 638	50 026	51 033	54 036	53 671
Lady Barron .....	86	91	1 082	1 451	1 168	1 542
Total .....	658 853	710 572	824 506	976 383	1 483 360	1 686 953

The decline in the proportion of sea trade attributed to Hobart since 1958-59 is related to the increased use of 'sea-road' facilities available through the ports of Devonport, Launceston and Burnie. The vessels involved regularly in the 'sea-road' service to northern and north-western ports are the *Melbourne Trader* and *Empress of Australia*, while Hobart is served by the *Seaway Prince* and *Seaway Princess*. The *Princess of Tasmania* inaugurated this type of service between Devonport and Melbourne in October 1959, the *Seaway Queen* began a 'sea-road' service between Hobart and Melbourne in June 1964, and a Hobart-Sydney service was commenced by the *Seaway King* in September 1964. In July 1975, the new *Seaway Prince* replaced the *Seaway Queen* and in February 1976, the *Seaway Princess*, a sister ship to the *Seaway Prince*, replaced the *Seaway King*.

The *Empress of Australia*, which had provided a regular service since January 1965 with Sydney-Hobart-Sydney as one route and Sydney-Bell Bay-Burnie-Sydney as the other, was withdrawn in April 1972 for refitting prior to replacing the *Princess of Tasmania* on the Bass Strait run. The *Empress of Australia* was replaced immediately by the *Australian Trader*, which had served northern ports regularly since mid-1969. However, the *Australian Trader*, which had provided overnight accommodation for passengers, was withdrawn from Tasmanian service from August 1976 due to substantial losses being made on this run and was subsequently sold to the Royal Australian Navy.

In October 1971 another roll-on roll-off type vessel, the *Mary Holyman*, commenced a regular service between South Australia and Tasmania with Port Adelaide-Hobart as one route and Port Adelaide-Burnie as the other. In January 1973 the *Darwin Trader*, a bulk carrier-container vessel, inaugurated a regular service with Darwin-Launceston as one route and Hobart-Darwin, via Melbourne, Sydney and Brisbane as the other. This vessel was withdrawn from the Hobart-Darwin service in October 1975. Another vessel, the new *Bass Trader*, commenced a regular service between Northern Tasmania and Queensland in August 1976. Several other vessels (e.g. *Sydney Trader*, *Brisbane Trader*) provide, as required, irregular sea-road services between the four main Tasmanian ports and other Australian states.

The *Straitsman* operated on a regular Melbourne-Grassy-Stanley service during May and June 1972 and again from October 1973 until 23 March 1974 when she rolled over and sank in the River Yarra. Temporary replacement vessels then maintained the service until October 1975 when the *Straitsman*, following a complete refit, recommenced the service.

In May 1976 a regular direct service between Tasmania and Western Australia was reintroduced by the *Beroona* with Burnie and Fremantle as the ports of call. In June 1977 this service was extended to include Hobart. The vessels *Wambiri*, *Boogalla* and *Nyanda* have also been used on this Tasmania-Western Australia service.

The next table compares the proportion of total sea trade values attributed to each port (using 1958-59 for comparison):

**Total Value of Sea Trade: Port Proportions, Tasmania  
(Per Cent)**

Port	1958-59	1973-74	1974-75	1975-76	1976-77	1977-78
Burnie .....	15.3	21.2	20.5	20.1	19.6	20.4
Devonport .....	6.8	18.3	17.2	16.5	15.3	16.6
Hobart .....	50.8	(a) 32.5	35.3	33.2	33.1	31.7
Currie .....	0.5	0.9	1.1	1.3	2.2	2.4
Launceston .....	23.5	24.0	23.1	25.4	26.2	25.6
Stanley .....	0.6	2.9	2.6	3.4	3.6	3.2
Strahan .....	2.4	(b) -	-	-	-	-
Lady Barron .....	-	0.2	0.1	0.1	0.1	0.1
Total .....	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Strahan from 1971-72.

(b) Included in Hobart (on 1 October 1970 the port of Strahan came under the control of the Marine Board of Hobart).

**Air Trade of Tasmanian Airports**

Although Tasmania has a number of airports, only six are used on a regular basis for interstate trade and of these, two accounted for 88 per cent of total air trade in 1977-78. Launceston's airport accounted for 56 per cent of the total value of air trade in 1977-78 while Hobart's airport accounted for a further 31 per cent. The following table shows the value of interstate air trade passing through Tasmanian airports:

**Total Value of Interstate Air Trade Classified According to Airport, Tasmania  
(\$'000)**

Airport	Imports		Exports		Total air trade	
	1976-77	1977-78	1976-77	1977-78	1976-77	1977-78
Hobart .....	15 422	17 492	6 237	6 879	21 659	24 371
Launceston .....	9 130	14 813	26 877	28 898	36 008	43 711
Devonport .....	2 426	2 814	402	472	2 828	3 286
Wynyard (a) .....	2 566	2 694	381	446	2 947	3 141
King Island .....	1 009	1 214	1 019	1 243	2 028	2 457
Flinders Island .....	356	361	244	267	600	628
Total .....	30 909	39 388	35 160	38 206	66 069	77 594

(a) Includes Smithton.

**Commodities Carried by Air**

It will be observed that the value of trade by air is about 4 per cent of the value of total overseas and interstate trade by sea and air combined. In 1977-78 the total value of air trade to and from Tasmania was \$77.6m compared to the total value of sea and air trade of \$1 764.5m. With regard to exports by air (valued at \$38.2m in 1977-78), the major group was 'textiles and yarns' valued at \$32.6m; exports of all foodstuffs (meat, rock lobster, fruit, etc.) accounted for a further \$2.2m. For imports there is a much greater range of commodities involved, the chief group being 'clothing and footwear' valued at \$23.8m in 1977-78.

The annual values of both imports and exports by air have not increased greatly over the past 10 years, which means that the quantities of goods involved have probably declined because of the general increase in prices over the period. A possible explanation is the improvement in sea carriage techniques (roll-on roll-off vessels, container vessels, etc.) and improved shipping schedules.

The following table shows the value of imports to and exports from Tasmania by air for recent years:

**Air Trade: Value of Interstate Imports and Exports, Tasmania  
(\$'000)**

Year	Imports	Exports	Year	Imports	Exports
1972-73 .....	21 238	30 626	1975-76 .....	27 882	36 280
1973-74 .....	24 760	34 566	1976-77 .....	30 909	35 160
1974-75 .....	26 850	31 699	1977-78 .....	39 388	38 206

**Imports of Principal Commodities**

The next table shows the value of the principal commodities imported into Tasmania by sea and air for a four-year period:

**Imports of Principal Commodities by Sea and Air: Values, Tasmania  
(\$'000)**

Commodity	1975-76	1976-77	1977-78
Beer, wine and spirits .....	5 724	6 825	7 369
Aluminium oxide and hydroxide .....	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Clothing and accessories .....	30 998	32 209	35 533
Cocoa beans and cocoa butter .....	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Confectionery .....	4 814	4 924	5 009
Footwear .....	6 324	6 558	7 659
Machinery—Electrical .....	27 098	27 595	28 325
Other .....	39 370	47 325	49 852
Metal manufactures .....	12 854	14 736	14 050
Metals .....	22 939	22 177	23 368
Motor vehicles—New .....	69 735	76 597	85 708
Other (a) .....	35 439	36 492	40 112
Ores and concentrates .....	43 326	51 174	44 387
Paper and paper manufactures .....	12 713	12 417	13 785
Petroleum products—Motor spirit .....	20 804	34 803	39 671
Fuel oils .....	25 939	37 337	39 360
Other .....	17 917	26 202	31 388
Pulp for paper-making .....	16 429	15 855	18 918
Rubber manufactures .....	7 686	8 931	9 772
Sugar, refined .....	5 100	5 267	6 243
Textile yarn and fabrics .....	20 683	22 176	19 281
Tobacco and cigarettes .....	15 679	16 182	17 689
Wheat .....	6 938	8 193	8 918
Other (b) .....	159 132	175 787	203 563
<b>Total imports .....</b>	<b>607 641</b>	<b>689 762</b>	<b>749 960</b>

(a) Mainly tourist and other motor vehicles imported as personal effects.

(b) Includes value of items marked '*n.p.*'.

The table that follows shows the quantities of the principal commodities imported and has been compiled, as far as is practicable, to match the preceding table of values.

**Imports of Principal Commodities by Sea and Air: Quantities, Tasmania**

Commodity	Unit of quantity	1975-76	1976-77	1977-78
Alcoholic beverages—				
Ale, beer, stout and cider .....	'000 L	1 529	1 239	1 370
Wine .....	'000 L	3 352	3 451	3 424
Spirits and liqueurs—Overseas (a) .....	'000 L al	86	48	32
Interstate .....	'000 L	879	902	888
Aluminium oxide and hydroxide .....	kg	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>
Cocoa beans and cocoa butter .....	kg	<i>n.p.</i>	<i>n.p.</i>	<i>n.p.</i>



## Imports of Principal Commodities by Sea and Air: Quantities, Tasmania—continued

Commodity	Unit of quantity	1975-76	1976-77	1977-78
Confectionery .....	t	2 713	2 695	2 571
Iron and steel .....	t	116 458	85 093	69 752
Motor vehicles—New .....	no.	19 223	21 744	19 865
Other (b) .....	no.	18 919	18 224	18 753
Ores and concentrates .....	t	416 217	508 960	455 855
Petroleum products—				
Motor spirit .....	'000 L	378 127	392 919	407 081
Fuel oils .....	'000 L	505 949	453 585	437 743
Pulp for paper-making .....	t	74 134	78 855	85 285
Sugar, refined .....	t	23 484	22 888	23 122
Tobacco and cigarettes .....	t	1 050	1 049	1 028
Wheat .....	t	74 748	78 456	80 096

(a) Overseas imports of spirits and liqueurs are recorded in 'litres alcohol'.

(b) Mainly tourist and other motor vehicles imported as personal effects.

## Imports from Principal Overseas Countries

The next table shows the value of imports, by main commodities, from principal overseas countries. In 1977-78 the United States of America was Tasmania's principal source of overseas imports. In this year the value of imports from the United States of America accounted for 16 per cent of the total value of \$115.8m of imports from overseas countries and Japan accounted for 15 per cent.

The United Kingdom was Tasmania's main trading partner for many years. However, Tasmania's trade with the U.K. has declined markedly in recent years, especially since the U.K. joined the European Economic Community in 1972. The U.K. was last Tasmania's major overseas source of imports (based on value) in 1971-72 and the major country of destination for exports in 1967-68. In 1977-78, the U.K. had dropped to Tasmania's fourth most important overseas source of imports (based on value) and the eighth most important country of destination for exports. The Tasmanian Government, however, still maintains a trade officer in London (but in no other overseas country) who operates from the offices of the Agent-General for Tasmania.

Value of Imports from Principal Overseas Countries, Tasmania  
(\$'000)

Commodity	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
UNITED STATES OF AMERICA						
Chemicals .....	333	556	1 090	729	1 147	862
Clays .....	422	576	1 023	685	1 165	341
Coke of coal .....	45	87	315	148	596	546
Machinery .....	2 362	2 329	4 182	2 503	2 781	5 998
Petroleum coke .....	1 073	946	2 535	2 858	3 833	6 836
Transport equipment .....	54	626	1 339	258	428	277
Woodpulp .....	1 070	2 094	2 463	1 372	1 474	595
Other (a) .....	627	1 716	1 771	1 486	2 207	2 648
Total .....	5 986	8 930	14 718	10 039	13 631	18 103
JAPAN						
Chemicals .....	558	879	1 368	1 160	2 469	3 362
Commercial vehicles .....	809	775	1 392	2 456	3 454	3 877
Machinery .....	1 172	2 266	2 916	2 095	2 048	2 438
Passenger motor vehicles .....	1 081	2 141	3 129	2 397	3 129	3 645
Textiles .....	2 566	3 579	1 902	2 319	2 617	2 104
Motor cycles .....	242	500	853	583	753	760
Other (a) .....	575	2 322	1 371	826	1 251	1 441
Total .....	7 003	12 462	12 931	11 836	15 721	17 627

**Value of Imports from Principal Overseas Countries, Tasmania—continued**  
(\$'000)

Commodity	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
<b>NEW ZEALAND</b>						
Food and beverages .....	186	86	281	235	432	813
Machinery .....	99	253	428	385	375	629
Paper and paper board .....	273	1 765	1 883	1 958	1 811	2 574
Textiles .....	538	468	336	422	285	189
Woodpulp .....	4 055	3 801	6 561	6 150	5 349	6 531
Other (a) .....	2 581	1 879	1 376	1 032	1 245	2 066
<b>Total .....</b>	<b>7 732</b>	<b>8 252</b>	<b>10 865</b>	<b>10 182</b>	<b>9 497</b>	<b>12 802</b>
<b>UNITED KINGDOM</b>						
Chemicals .....	687	725	735	510	727	1 090
Food, beverages and tobacco .....	178	149	441	358	579	688
Machinery .....	1 406	4 004	2 561	3 130	2 371	2 991
Metal manufactures .....	503	521	646	611	933	946
Printed matter .....	288	275	547	789	466	657
Textiles .....	827	1 006	1 101	934	1 327	1 917
Tyres and tubes .....	187	196	463	249	456	391
Other (a) .....	1 924	3 361	2 220	2 031	2 394	3 991
<b>Total .....</b>	<b>6 000</b>	<b>10 237</b>	<b>8 714</b>	<b>8 612</b>	<b>9 253</b>	<b>12 671</b>
<b>CANADA</b>						
Machinery .....	100	176	120	725	377	1 320
Textiles .....	97	118	150	107	140	201
Woodpulp .....	3 666	4 729	5 599	6 993	7 964	9 628
Other .....	478	3 843	2 034	306	748	1 076
<b>Total .....</b>	<b>4 341</b>	<b>8 866</b>	<b>7 903</b>	<b>8 131</b>	<b>9 229</b>	<b>12 225</b>

(a) Includes value of items not available for separate publication.

**Exports of Principal Commodities**

The following table shows the value of principal commodities exported (interstate and overseas) from Tasmania by sea and air:

**Exports of Principal Commodities by Sea and Air: Values, Tasmania**  
(\$'000)

Commodity	1975-76	1976-77	1977-78
Butter (including butter oil) .....	7 527	3 851	5 941
Cheese .....	7 633	12 317	14 409
Fertilisers, manufactured .....	2 155	59	287
Fish, crustaceans and molluscs .....	4 939	6 622	7 634
Fruit—Apples (fresh) .....	8 440	5 593	10 880
Juices and syrups .....	1 065	672	735
Other .....	2 689	3 012	2 701
Hides and skins (cattle, calf, horse and sheep) .....	4 871	6 658	8 290
Hops .....	1 447	1 625	2 298
Live animals .....	1 402	4 034	7 225
Machinery .....	4 983	4 666	5 427
Meat—Beef and veal .....	13 648	15 679	16 670
Lamb and mutton .....	2 504	3 718	4 033
Other .....	1 238	943	956
Metal manufactures .....	4 599	1 840	1 738
Metals, refined—Cadmium .....	2 815	2 233	1 691
Zinc .....	74 926	98 318	87 129

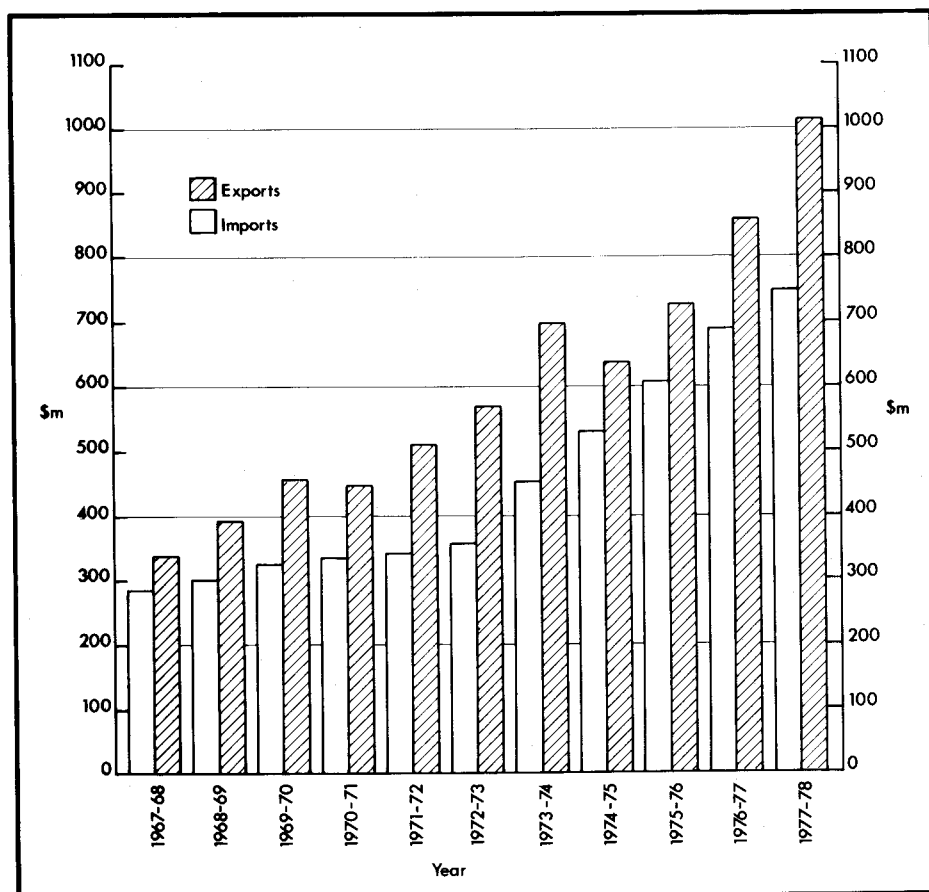
**Exports of Principal Commodities by Sea and Air: Values, Tasmania—continued**  
(\$'000)

Commodity	1975-76	1976-77	1977-78
Motor cars and commercial vehicles (a) .....	34 854	36 651	41 427
Ores and concentrates—Copper .....	22 021	26 371	20 766
Iron .....	32 531	45 025	45 630
Lead .....	12 169	16 208	12 904
Tin .....	17 428	35 010	50 443
Tungsten .....	8 439	22 333	33 653
Sulphuric acid .....	7 083	7 730	8 679
Tallow .....	2 065	2 206	4 931
Textile yarn, fabrics and made-up articles .....	41 656	35 811	33 285
Timber—Dressed .....	12 511	15 287	15 486
Undressed .....	13 568	21 796	22 796
Vegetables, fresh and preserved .....	23 872	31 128	34 118
Woodchips .....	35 524	n.p.	n.p.
Wool, greasy .....	31 232	33 685	24 048
Commodities not available for publication (b) .....	244 863	334 950	435 484
All other exports .....	41 554	23 636	52 895
<b>Total .....</b>	<b>728 251</b>	<b>859 667</b>	<b>1 014 589</b>

(a) Mainly tourist and other motor vehicles exported as personal effects.

(b) Commodities comprising this item are: aluminium, alumina, beadings and mouldings, paper, hardboard, cement, ferro-manganese, silicon-manganese, confectionery, cocoa and chocolate, food beverages, paper pulp, metal scrap, calcium carbide, titanium oxides, plywood, rutile, zirconium, particle board, asbestos-cement articles, ferro-silicon and from 1976-77, woodchips.

**Total Imports and Exports, Tasmania**



The next table shows the quantities of the principal commodities exported and has been compiled, as far as possible, to match the preceding table of values:

**Exports of Principal Commodities by Sea and Air: Quantities, Tasmania**

Commodity (a)	Unit of quantity	1975-76	1976-77	1977-78
Butter (including butter oil)	t	9 720	4 363	6 248
Cheese	t	9 026	14 552	15 222
Fertilisers, manufactured	t	35 694	657	2 810
Fish—Abalone	t	978	872	1 013
Rock lobster	t	524	711	608
Other	t	715	885	680
Fruit—Apples (fresh)	t	45 705	24 284	41 550
Juices and syrups	'000 L	1 496	989	698
Other	t	8 838	8 413	7 165
Hides and skins (cattle, calf and sheep)	t	8 306	7 729	9 132
Hops	t	918	1 625	1 287
Live animals—Cattle	no.	8 612	16 401	30 007
Sheep	no.	93 467	188 753	241 748
Meat—Beef and veal	t	15 324	16 463	15 424
Lamb and mutton	t	3 969	5 116	4 267
Pork	t	301	293	121
Other	t	1 289	1 119	1 244
Metals, refined—Cadmium	t	626	447	369
Zinc	t	138 243	162 001	167 870
Motor cars and commercial vehicles (b)	no.	18 553	18 133	19 478
Ores and concentrates—Copper	t	85 530	87 539	78 540
Iron	'000 t	2 025	2 242	2 054
Lead	t	37 311	44 937	32 324
Tin	t	9 340	14 506	16 824
Tungsten	t	2 708	3 057	3 462
Timber—Dressed	m <sup>3</sup>	88 880	102 987	86 753
Undressed	m <sup>3</sup>	149 560	210 240	173 985
Vegetables—Fresh	t	15 305	12 464	6 573
Preserved	t	57 736	75 234	72 807
Woodchips	'000 t	1 734	n.p.	n.p.
Wool, greasy	t	17 435	16 204	10 805

(a) Principal commodities not available for publication comprise: aluminium, alumina, hardboard, cement, ferro-manganese, silicon-manganese, confectionery, cocoa and chocolate, food beverages, paper-pulp, metal scrap, calcium carbide, titanium oxides, plywood, rutile, zirconium, particle board, asbestos-cement articles, ferro-silicon and, from 1976-77, woodchips.

(b) Mainly tourist and other motor vehicles exported as personal effects.

### Export of Selected Commodities

The following table shows, in summary form, total exports of some important commodities for selected years since 1939-40:

**Exports of Selected Commodities by Sea and Air, Tasmania**

Commodity	Unit of quantity	1939-40	1949-50	1959-60	1969-70	1977-78
QUANTITY						
Apples and pears, fresh	t	74 373	56 911	80 683	109 384	42 257
Butter (including butter oil)	t	2 816	2 179	7 864	12 611	6 248
Hops	t	719	802	1 340	1 368	1 287
Meat, fresh, chilled or frozen	t	2 534	957	9 225	17 048	20 984
Ores and concentrates	'000 t	137	6	28	2 175	2 196
Timber, dressed and undressed	'000 m <sup>3</sup>	120	148	178	207	261
Wool, greasy	t	5 110	5 228	12 690	16 513	10 805
Zinc, refined	t	72 047	81 998	115 680	163 847	167 870

## Exports of Selected Commodities by Sea and Air, Tasmania—continued

Commodity	1939-40	1949-50	1959-60	1969-70	1977-78
VALUE (\$'000)					
Apples and pears, fresh .....	2 270	4 348	9 490	14 905	11 092
Butter (including butter oil) .....	742	1 277	5 390	6 950	5 941
Meat, fresh, chilled or frozen .....	310	312	3 801	11 774	21 557
Ores and concentrates—Copper .....	—	2	40	8 369	20 766
Iron .....	—	—	—	25 286	45 630
Lead .....	595	386	2 956	7 358	12 904
Tin .....	688	723	1 507	16 207	50 443
Textile yarn and fabrics .....	2 674	5 540	17 524	27 784	33 285
Timber, dressed and undressed .....	1 238	2 930	8 952	16 238	38 282
Wool, greasy .....	1 376	6 202	15 254	17 821	24 048
Zinc, refined .....	2 856	9 964	22 922	42 625	87 129

## Exports to Principal Overseas Countries

Details for commodities exported to principal overseas countries are given in the next table:

## Exports to Principal Overseas Countries, Tasmania

Commodity	Unit of Quantity	Quantity			Value (\$'000)		
		1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
JAPAN							
Abalone .....	t	707	313	741	1 832	1 351	3 335
Cheese .....	t	4 257	7 207	7 743	3 904	6 144	7 150
Copper ores and concentrates .....	t	71 576	65 772	59 791	16 791	18 120	14 784
Feeding-stuff for animals—							
Meat and bone meal .....	t	3 466	2 788	653	310	509	133
Milk powder .....	t	—	3 780	995	—	672	179
Ferro-alloys .....	t	—	2 500	5 375	—	1 030	1 771
Food beverages .....	t	—	—	328	—	—	385
Hides and skins (cattle and calf) ..	t	3 053	2 189	2 563	1 561	1 723	1 997
Iron ores and concentrates .....	'000 t	1 980	2 146	2 050	31 810	42 872	45 496
Malt and malt extract .....	t	406	775	171	143	227	95
Meat, fresh, chilled or frozen .....	t	4 962	4 525	3 650	4 446	3 573	3 703
Milk, dried .....	t	903	883	345	287	240	111
Onions, brown .....	t	916	131	1 104	134	20	190
Tallow .....	t	3 501	301	886	647	77	298
Wool, greasy .....	t	2 067	2 489	902	3 505	5 042	1 943
Other (a) .....	..	..	..	..	45 298	66 591	73 816
Total .....		..	..	..	110 670	148 191	155 385
UNITED STATES OF AMERICA							
Beef and veal .....	t	9 403	7 509	9 187	8 320	8 034	10 141
Cadmium .....	kg	92 200	48 000	57 000	112	377	283
Casein .....	t	59	501	737	56	512	804
Cheese .....	t	1 539	1 392	1 911	1 477	1 425	2 235
Ferro-alloys .....	t	—	—	25 921	—	—	5 167
Hops .....	t	—	14	103	—	17	243
Lead concentrates .....	t	33 125	36 013	32 324	10 950	12 360	12 904
Oil seeds .....	t	592	690	727	579	760	480
Rock lobster .....	kg	33 739	33 589	68 655	339	373	676
Wheat gluten .....	t	892	1 448	1 522	411	988	862
Wool, greasy .....	t	204	208	131	426	461	288
Zinc, refined .....	t	15 162	22 355	22 636	9 493	15 055	13 403
Other .....	..	—	—	—	2 177	3 230	1 004
Total .....	..	—	—	—	34 339	43 593	48 488

(a) Includes item(s) for which details are not available for separate publication.

## Exports to Principal Overseas Countries, Tasmania—continued

Commodity	Unit of Quantity	Quantity			Value (\$'000)		
		1975-76	1976-77	1977-78	1975-76	1976-77	1977-78
MALAYSIA							
Chemicals .....	..	-	-	-	-	-	218
Colouring materials .....	t	180	458	627	119	337	432
Ferro-alloys .....	t	-	-	2 193	-	-	505
Meat, fresh or frozen .....	t	22	106	334	12	95	238
Paper .....	t	1 880	3 050	3 685	1 270	870	1 413
Tin concentrates .....	t	774	2 052	7 133	2 003	10 741	25 883
Zinc .....	t	1 955	2 177	2 848	1 182	1 411	1 410
Other .....	..	-	-	-	753	934	494
Total .....	..	-	-	-	5 340	14 389	30 594
INDONESIA							
Butter .....	t	-	-	969	-	-	1 082
Colouring materials .....	t	251	30	393	167	22	247
Zinc .....	t	17 152	20 760	30 907	10 143	13 683	15 708
Other (a) .....	..	-	-	-	1 802	1 709	1 358
Total .....	..	-	-	-	12 112	15 414	18 395
THAILAND							
Colouring materials .....	t	17	327	591	10	227	384
Food beverages .....	t	-	-	212	-	-	317
Milk, dried .....	t	1 421	3 598	1 059	539	1 347	601
Zinc .....	t	12 874	15 153	14 480	7 787	10 039	7 284
Other (a) .....	..	-	-	-	516	370	1 466
Total .....	..	-	-	-	8 852	11 983	10 053

(a) Includes item(s) for which details are not available for separate publication.

## RETAIL TRADE IN TASMANIA

## Censuses of Retail Establishments

*Historical*

Before the Integrated Economic Censuses of 1968-69, retail censuses were undertaken for years ended 30 June 1948, 1949, 1953, 1957 and 1962. Census information collected was extensive. Details are available for statistical divisions, local government areas and special statistical retail areas.

In 1968-69 simultaneous economic censuses for five sectors were undertaken: retailing; manufacturing; mining; wholesaling; and electricity and gas. Results of economic censuses for recent years appear in the section 'Integrated Economic Censuses' in Chapter 18 together with definitions of concepts and terms used.

*Retail Census—1973-74*

A retail census was conducted covering trading in 1973-74 but there were no data items collected for purchases, stocks or capital expenditure (as there had been in the 1968-69 census). Certain types of establishment were excluded: bread and milk vendors; footwear repairers; motion picture theatres; and laundries and dry cleaners. The aim was to provide an up-to-date framework for the quarterly retail surveys; therefore the types of establishment included and the financial data collected were limited to this rather narrow purpose. Results from the 1973-74 census are summarised in the 1979 *Year Book*.

## Quarterly Estimates of Value of Retail Sales

Each quarter, returns of retail sales are collected from a sample of all retail businesses recorded in the most recent census of retail establishments. The sample selected represents the field covered by the census. This sample is varied annually to make provision for 'new' establishments opening up, 'old' establishments closing down and 'old' establishments changing type. ('Old', in this context relates to business as recorded at the most recent census of retail establishments.)

Retail sales relate principally to sales to the final consumer of new and used goods for personal and household purposes. The survey is intended primarily as an indicator of such sales.

*Retail Sales of Goods, Tasmania*

The following tables set out details of estimated value of retail sales, by commodity groups, for recent periods:

Estimated Value of Retail Sales of Goods by Commodity Groups, Tasmania (a)

Commodity group	1978-79		Six months ended December 1979	
	Value \$m	Proportion of total	Value \$m	Proportion of total
Groceries .....	132.0	17.6	72.6	17.6
Butchers' meat .....	48.2	6.4	27.4	6.6
Other foods .....	72.8	9.7	38.9	9.4
Beer, wine and spirits .....	100.5	13.4	55.5	13.4
Clothing and drapery .....	122.1	16.3	65.6	15.9
Footwear .....	19.1	2.5	10.2	2.5
Domestic hardware, china and glassware .....	29.5	3.9	17.2	4.2
Electrical goods .....	53.2	7.1	28.7	6.9
Furniture and floor coverings .....	38.8	5.2	21.6	5.2
Chemists' goods .....	39.8	5.3	22.0	5.3
Newspapers, books, stationery, etc. ....	33.3	4.4	19.4	4.7
Other goods (b) .....	61.2	8.2	34.5	8.3
Total (b) .....	750.5	100.0	413.6	100.0

(a) Based on sample from the 1973-74 Retail Census.

(b) Excluding motor vehicles, parts, petrol, etc.

Estimated Value of Retail Sales by Commodity Groups, Tasmania  
(\$ million)

Period	Original series				
	Groceries	Butchers' meat	Other food	Beer, wine, spirits	Clothing, drapery piece-goods, footwear
1968-69 (a) .....	48.7	20.7	30.5	30.9	49.5
1973-74 (a) .....	63.8	26.2	35.8	47.8	90.5
1977-78 (b) .....	120.8	37.6	64.0	91.6	133.1
1978-79 (b) .....	134.1	46.8	75.5	99.0	138.5
1978—					
December .....	35.6	11.8	19.9	26.5	37.7
1979—					
March .....	32.9	11.7	18.6	25.6	31.5
June .....	33.9	12.5	19.5	24.4	37.2
September .....	35.1	12.3	19.1	24.9	33.1
December .....	39.2	13.4	22.5	28.8	39.8
1980—					
March .....	38.1	13.0	21.9	26.5	32.9



Estimated Value of Retail Sales by Commodity Groups, Tasmania—Continued  
(\$ million)

Period	Original series				Seasonally adjusted, total (excl. motor vehicles etc.)
	Domestic hardware, electrical goods, furniture, floor coverings	Chemists' goods	Other goods	Total (excl. motor vehicles etc.)	
1968-69 (a)	34.8	11.7	30.8	257.6	..
1973-74 (a)	45.9	20.2	44.4	374.5	..
1977-78 (b)	119.9	34.2	84.2	685.4	..
1978-79 (b)	118.4	39.8	93.5	745.6	..
1978—					
December	34.6	11.2	27.9	205.2	185.1
1979—					
March	26.4	9.3	22.5	178.5	190.0
June	29.1	10.0	22.1	188.7	191.8
September	28.4	10.0	22.3	185.2	193.3
December	35.0	11.8	31.1	221.6	198.1
1980—					
March	27.3	10.2	25.0	194.9	206.8

(a) Actual retail census results.

(b) Series based on 1973-74 retail census. Estimates from the new sample have been revised on the basis of information available from the 1979 census of new businesses.

### Retail Sales of Goods, Australia

The following table gives details of the estimated value of retail sales of goods for recent years and quarters for Australia at current (actual prices paid) and constant (average 1974-75) prices. The constant prices series is derived from the original series by using specially constructed price indexes for the various commodity groups. This eliminates the direct effects of price changes.

Estimated Value of Retail Sales of Goods: Australia (a)  
(\$ million)

Year or quarter	Food and drink		Other (b)		Total (b)	
	Current prices (c)	Constant prices (d)	Current prices (c)	Constant prices (d)	Current prices (c)	Constant prices (d)
1977-78r	11 165.3	8 198.0	12 388.0	9 121.7	23 553.4	17 319.7
1978-79	12 636.2	8 236.6	13 338.4	9 182.5	25 974.6	17 419.1
1978-79—						
September	2 939.9	2 050.1	3 108.7	2 201.5	6 048.6	4 251.6
December	3 330.5	2 182.2	3 875.3	2 677.4	7 205.8	4 859.6
March	3 149.4	2 017.1	3 006.8	2 060.3	6 156.2	4 077.4
June	3 216.4	1 987.2	3 347.6	2 243.3	6 564.0	4 230.5
1979-80—						
September	3 310.0	1 994.6	3 319.3	2 199.8	6 629.3	4 194.4
December	3 743.0	2 218.1	4 160.0	2 715.0	7 903.0	4 933.1

(a) Excludes Northern Territory and Australian Capital Territory.

(b) Excludes motor vehicles, parts, petrol, etc.

(c) Original prices.

(d) Average 1974-75 prices—see text preceding table.

### EXPORTING FINANCE AND INSURANCE CORPORATION

The Export Finance and Insurance Corporation (EFIC) is a public instrumentality guaranteed by the Federal Government. EFIC's statutory function is the encouragement of trade with overseas countries by providing a specialised range of insurance, guarantees and financing facilities not normally obtainable from commercial insurers. It is required to operate

on commercial lines and to be self-supporting. Australia-wide, EFIC has approximately 1 200 policyholders and insures approximately \$1 200 million worth of Australian exports each year.

### *Range of EFIC Facilities*

Facilities provided by EFIC fall into five main categories:

- (i) Insurance of exporters against the risk of non-payment by overseas buyers for a variety of commercial, economic and political risks.
- (ii) Guaranteeing Australian banks and financial institutions in respect of finance they provide to Australian exporters.
- (iii) Financing, in special circumstances and at concessional rates of interest, Australian exports of capital goods and related services.
- (iv) Insuring Australian firms investing in enterprises in foreign countries against the risk of loss from expropriation, war damage or exchange transfer delays.
- (v) Assisting banks and insurance companies to provide the various types of bonding facilities and insuring the possible unfair calling of bonds established as support for export transactions.

### *Assistance with Finance*

EFIC does not provide finance for goods sold on relatively short payment terms. However, claims payable under EFIC's policies may be assigned to the bank or financial institution that is backing the policyholder. In this way, the EFIC policy can be used by the exporter as a form of collateral security to assist in financing his export trade.

### *Cost of Cover*

Premium rates are based on the markets to which the exporter ships and the length of credit which he extends to his overseas customers. At present, the average rate over the whole range of EFIC short-term business is less than 50c per \$A100 of exports insured.

### *Activities within Tasmania*

The EFIC Office serving the Victoria-Tasmania region is located in B.H.P. House, 140 William Street, Melbourne (Telephone (03) 67 5302). Contact can also be made through the Regional Director, Department of Trade and Resources, Continental Building, 162 Macquarie Street, Hobart. During 1979-80, 12 Tasmanian EFIC policyholders had total export cover of \$2.37 million. Other Tasmanian companies had export insurance cover with EFIC arranged through their mainland head offices. Principal Tasmanian exports covered were dairy produce, fresh fruit and vegetables, and timber.

### **Further References**

#### *ABS publications produced by the Tasmanian office*

Overseas Trade, Tasmania (5402.6) (annual, 1979-80 released 24-12-80, 4 pp.).

Census of Retail and Selected Services Establishments, Tasmania (8601.6) (irregular, 1973-74 released 2-10-75, 22 pp.).

#### *ABS publications produced by the Canberra office*

Overseas Trade, Australia, Part 1-Exports (Preliminary) (5407.0) (annual, 1978-79 issue released in February 1980, 114 pp.).

Overseas Trade, Australia, Part 2-Imports (Preliminary) (5408.0) (annual, 1978-79 issue released in April 1980, 262 pp.).

Exports, Australia (5404.0) (monthly, June 1980 issue released 29-10-80, 18 pp.).

Imports, Australia (5406.0) (monthly, June 1980 issue released 28-10-80, 21 pp.).

Retail Sales of Goods: Australia (8501.0) (monthly, October 1980 released 1-12-80, 2 pp.).

Retail Sales of Goods: Australia (Preliminary) (quarterly, September quarter 1980 released 20-1-81, 3 pp.).

Retail Sales of Goods: (8503.0) (quarterly, September quarter 1980 released 12-2-81, 8 pp.).

Census of Retail Establishments and Selected Service Establishments Final Bulletin Australia (8614.0) (irregular, 1973-74 released 17-10-75, 22 pp.).

## **Chapter 11**

### **TRANSPORT AND COMMUNICATION**

#### **PORT AUTHORITIES**

##### **Introduction**

Tasmania has a number of ports capable of accommodating overseas vessels; they are sited on the Derwent and Huon Rivers in the south (Hobart and Port Huon); in Spring Bay on the east coast; on the River Tamar in the north (Inspection Head, Long Reach and Bell Bay); on the Mersey River (Devonport), in Emu Bay (Burnie) and at Port Latta, all in the north-west. All these ports provide depths of approximately 9 metres or more of water at berths; Port Latta provides a depth of 16 metres nearly one and a half kilometres off-shore.

Interstate and intrastate trade passes through the main ports and operates as well through ports at Strahan, Stanley, Ulverstone, Currie (on King Island) and Lady Barron (on Flinders Island).

This section deals primarily with the authorities which control the harbours but a brief description is given of the main ports.

##### **Port of Hobart**

###### *Location*

The approach to the Derwent and the Port of Hobart is made through a very wide strait between Cape Queen Elizabeth (Bruny Island) and Cape Raoul (Tasman Peninsula), approximately 50 kilometres south-east of the city. The mouth of the Derwent, five and a half kilometres wide, lies 19 kilometres south-east of the port which is built upstream on the western bank in a U-shaped cove; the opposite bank lies two and a half kilometres away to the east. The shores of the Derwent and the arms of the cove act as natural breakwaters.

###### *Description*

The present main port is situated in the Sullivan's Cove and Macquarie Point area. Sullivan's Cove is U-shaped with 610 metres separating the southern and northern arms. The southern area is devoted to Princes Wharf with berths numbered one to four. Between Numbers 1 and 2 is Princes Intermediate, the bulk grain berth. The centre of the cove contains Elizabeth Street Pier, while the northern area is made up of Macquarie Berths No. 1, 2 and 3. Turning up river from the outer end of Macquarie Berth No. 3, the area known as Macquarie Point has been developed to provide the port with two additional roll-on roll-off berths and one container/general cargo berth. This area has now become the major centre of port activity, and has been provided with modern cargo handling equipment, including a 254-tonne fully mobile crane, suitable for handling containers. The two roll-on roll-off berths are operated by the Union Steamship Company's 'Seaway' interstate service, connecting Hobart with Melbourne and Sydney. The third new berth is 224 metres long and is capable of accommodating the largest general cargo carriers in service. Adjacent to these new berths is 8.4 hectares of sealed cargo area, two large all weather cargo sheds, a dual rail spur connecting into the State's main rail system and adequate holding points for refrigerated containers.

The most striking feature of the Port of Hobart is the ease with which large vessels can be brought to berth. Tides present no problem, the maximum rise and fall being 1.37 metres (average approximately 0.61 metres), and dredging of approach channels has never been necessary.

### *Subsidiary Ports*

In addition to the main port in the heart of the city, there are a number of subsidiary outlets serving the south of the State. Port Huon wharf, located on the west bank of the Huon River near Geeveston, is in the centre of the principal orcharding area and used mainly for fruit exports. Also based on the Huon River (at Hospital Bay) is the A.P.M. Ltd private wharf (for export of paper pulp). At the Port of Spring Bay, near Triabunna on the east coast, accommodation has been provided for bulk carriers loading woodchips for Japan. In the Derwent itself, four kilometres upstream from the main port, is a tanker berth at Selfs Point where bulk petrol and oil are stored; tankers pass under the 47-metre high navigation span of the Tasman Bridge on their way to Selfs Point.

The Selfs Point area has been developed as a petroleum products storage area and has replaced the Macquarie Wharf facilities as Hobart's petroleum installation. One and a half kilometres upstream from Selfs Point is the Electrolytic Zinc Company Ltd private wharf at Risdon. At Boyer, located nearly 32 kilometres upstream from the main port, is the Australian Newsprint Mills Ltd plant. Newsprint is ferried to the main port by barge.

### *Administration*

The Marine Board of Hobart is the authority controlling the main ports of Hobart, Port Huon and the Port of Spring Bay. When the Marine Board of Strahan ceased to function on 30 September 1970, Parliament extended the responsibilities of the Marine Board of Hobart to cover the control and operation of the Port of Strahan. The Board's jurisdiction covers the west, south and east coasts of Tasmania between the parallel of 41½° south latitude and Cape Portland.

## **Port of Launceston**

### *Location*

The Port of Launceston is situated on the River Tamar, which originates at the confluence of the North Esk and South Esk Rivers at the City of Launceston and flows 60 kilometres to Bass Strait where deep water and broad expanses of river provide a valuable natural harbour. In this area, encompassing Bell Bay, Inspection Head and Long Reach, are located the major activities of the Port of Launceston. A tidal range of up to 3.6 metres creates strong tidal currents, which by natural scour eliminate the need for any maintenance dredging in the lower reaches of the river.

Because extensive areas of deep water frontage are available, the development of the port is decentralised with the main operations located as follows:

- (i) *Bell Bay*: The Bell Bay site is on the eastern shore, some 13 kilometres upstream from the mouth of the Tamar. The Bell Bay and Long Reach areas are linked to the railway system. Wharves include the Comalco Aluminium Bulk Berth, the A.N.L. Melbourne/Sydney roll-on roll-off/lift-on lift-off Cargo Terminal, the Temco Bulk Berth, the P.L.A. tanker berth and the P.L.A. Common User Berth general cargo berth. The port has large, modern cold store facilities, stock-yards and petroleum storage tanks.
- (ii) *Long Reach*: Port facilities have been developed upstream from Bell Bay, the main function being export of woodchips from adjacent plants.
- (iii) *Inspection Head*: Overseas berths are situated on the western bank, opposite Bell Bay, for shipment of fruit, frozen meat, fish and general cargo. Large cool storage and freezer facilities are provided as well as bulk storage and special loading facilities for tallow.
- (iv) *Kings Wharf, Launceston*: Includes berths for interstate and intrastate trade; facilities also include a graving dock and shiplift and fitting-out berths for docking and repair of vessels up to 2 200 tonnes.

### *Description*

All berths and facilities now in service in the port have been constructed since about 1950. Channel and lighting improvements in the lower reaches have been carried out over recent years, permitting vessels drawing up to 11.1 metres to work the river for 16 kilometres

from Bass Strait to the site of the new woodchip berths in Long Reach. The channel improvement works were designed to provide for the rapidly growing industrial complex at Bell Bay which is creating an ever increasing demand for large bulk carriers.

#### *Administration*

The port is administered by the Port of Launceston Authority whose jurisdiction covers the full length of the River Tamar, together with the northern coastline westward to Badger Head and eastward to Cape Portland.

### **Port of Devonport**

#### *Location*

The Port of Devonport is situated on the Mersey River within two kilometres of the coast. The entrance is sheltered by Mersey Bluff on the west and by a retaining wall extending over half a kilometre northward from the eastern shore of the river. The river was always a natural harbour for small craft and its development as a major port by extensive dredging and engineering works has resulted in a secure harbour for large ships.

#### *Description*

The main harbour is formed around two turning basins, each 259 metres in diameter with wharves on both banks providing 1 067 lineal metres of berthage.

The western bank contains four overseas and interstate berths and one specialised cattle jetty. These berths are provided with storage sheds, oil pipelines, wheat silos, bulk cement silos and bulk tallow silos, as well as one of the largest and most modern cold storage facilities in the State. Provision has also been made for the handling of bulk commodities and heavy lifts while all berths are connected to the railway network.

Two terminals for roll-on roll-off and container cargo are located on the eastern bank; one is leased to the Australian National Line and the other is a common-user facility. Both are equipped with stern loading ramps and cranes for lift-on lift-off cargo. Extensive vehicle marshalling and cargo assembly areas are provided, with land available for expansion. Both major unities and container operating berths are fully equipped with power points for refrigerated containers. Approximately 115 000 passengers pass through the No. 1 Terminal each year. In July 1972 the *Empress of Australia* replaced the *Princess of Tasmania* on the passenger run to and from Melbourne. The A.N.L. vessels *Sydney Trader*, *Brisbane Trader*, and *Townsville Trader* maintain a regular cargo service from both terminals.

A 30-tonne portal travelling crane at No. 2 Berth is capable of handling all types of cargo units. For the speedy handling of bulk cargoes a 14-tonne grab and 40-tonne capacity hopper are available as auxiliaries to the crane. A 30-tonne portainer crane operates at No. 1 Berth. Further extensions of port facilities will depend on proposed expansion by major industries in the area.

### **Port of Burnie**

#### *Location*

The ports of Hobart, Launceston and Devonport all lie within the shelter of rivers but the Port of Burnie, on Emu Bay, was built out into the open sea in the lee of Blackmans Point. Protection from the potentially rough seas of Bass Strait is afforded by two large breakwaters. Burnie is a deep-water port with no tidal restrictions, except occasionally for the larger vessels, and is virtually fog-free. It is in operation 24 hours every day, and vessels can be at full speed 20 minutes after departure. All wharves are connected to the State railway system.

#### *Description*

The shelter necessary for all-weather use of the port is provided by a 380-metre breakwater extending from Blackmans Point in a south-easterly direction. The wharves are thus protected by the point and by the breakwater from swells coming in from the west or north, the two quarters from which heavy seas are feared. Ocean Wharf is constructed immediately in the lee of the breakwater, the two structures appearing as one. Other berths are provided by piers parallel to the breakwater but lying further south.

An island breakwater sited north-east from the end of Ocean Wharf and consisting of concrete caissons 488 metres long, is orientated south-east and is calculated to give ample protection for up to 610 metres of berthage south of existing piers. An interesting feature is the use of the lee of the island breakwater for a tanker berth for both petroleum and sulphuric acid. The fuel is pumped to the land along a submarine pipe, and the sulphuric acid is pumped from the berth over a bridge spanning the gap between the two breakwaters.

A modern passenger and roll-on roll-off cargo terminal handles 640 000 tonnes of general cargo shipped annually by Australian National Line vessels servicing Melbourne, Sydney and Queensland ports. The terminal is equipped with a 40-tonne portal crane plus a 25-tonne auxiliary hoist. A further roll-on roll-off berth at North McGaw pier handles general cargo for the Adelaide service.

Burnie has six other berths in regular use. Ocean Wharf, North McGaw and North Jones Pier (old) are conventional berths used for general cargo and the handling of L.A.S.H. barges. South McGaw Pier is equipped with one 12-tonne and one 25-tonne crane. New Jones Pier North is a bulk cargo berth, capable of handling vessels up to 240 metres in length and 10.0 metres draft. It is traversed by a conveyor loader, owned by the Emu Bay Railway Company Ltd, with a loading rate of 1 270 tonnes per hour. It handles zinc, lead and copper concentrates from the west coast mines, and calcines from the Wivenhoe Acid Plant. New Jones Pier South is the port's major general cargo berth, used by quarter ramp R.O.R.O. vessels, L.A.S.H. vessels of up to 250 metres length and 9.8 metres draft, and cellular container vessels. It has two large transit sheds, incorporating a cool store. Adjacent to this berth is a container compound with a capacity of 250 standard 'T.E.' units of which 96 may be reefer. There is additional storage area close by for a further 250 units, and also a bulk tallow installation servicing both North and South berths.

#### Circular Head (Port Latta)

A deep-water offshore terminal, capable of accommodating bulk ore carriers, has been constructed at Port Latta for the export of iron ore pellets to Japan. The loading facility consists of a 1.2 metre wide conveyor belt which carries pellets to two swivel loaders located 1.6 kilometres offshore. Vessels moor in 15.8 metres of water to take on pellets, the system having a discharge capacity of about 3 050 tonnes per hour.

#### Constitution of Port Authorities

##### Election of Wardens

The present system of choosing port authority wardens is summarised in the following table:

Port Authorities: Election of Wardens

Authority	Number of wardens	System of election of wardens
Hobart Marine Board.....	9	Special electorate of ship-owners, importers and exporters
Port of Launceston Authority.....	5	Electors of Launceston, Beaconsfield and George Town as for local government elections
Burnie Marine Board.....	9	} Municipal electors within proclaimed areas
Devonport Marine Board.....	11	
Circular Head Marine Board.....	7	
King Island Marine Board.....	5	
Flinders Island Marine Board.....	3	Appointed by the Government

##### Boards of Hobart and Launceston

The wardens of the Hobart Marine Board are elected by a special electorate of ship-owners, importers and exporters. The number of votes that each importer and exporter may exercise is proportional to the value of goods he imports or exports, while ship-owners' voting rights are proportional to the tonnage of their vessels. Three wardens retire each year; the Master Warden is elected by Board members annually.

In the case of the Port of Launceston Authority, marine board electors are those qualified to vote at elections for aldermen of the City of Launceston or for councillors of the municipalities of Beaconsfield and George Town.

#### Navigation and Survey Authority of Tasmania

The Authority was constituted in 1963 to implement sections of the *Marine Act 1976* relating to the safety of life and property at sea. Member marine boards contribute equally to the costs of running the Authority; the income is derived from survey and service fees.

#### Finances of Port Authorities

The following table gives details of revenue and expenditure for each port authority in 1978-79:

**Port Authorities**  
**Receipts and Expenditure: All Funds, 1978-79**  
**(\$'000)**

Particulars	Authority							Total
	Hobart	Launceston	Devonport	Burnie	Circular Head	King Island	Flinders Island	
REVENUE FUNDS								
Receipts—								
Wharfage charges . . . .	2 433	2 435	1 308	1 818	74	117	52	8 235
Other service charges . .	1 652	2 394	1 810	886	70	12	7	6 830
Plant hire . . . . .	362	1 067	199	650	18	8	—	2 305
Government grants . . .	—	—	—	—	19	98	—	117
Other (a) . . . . .	191	521	136	260	6	16	2	1 134
Total . . . . .	4 638	6 416	3 453	3 615	187	251	61	18 621
Payments (b)—								
Administration . . . . .	586	701	292	445	19	41	2	2 086
Debt charges—								
Interest . . . . .	1 181	705	597	959	74	5	11	3 531
Redemption and sinking fund contributions . . . . .	717	523	351	546	47	5	5	2 193
Works and services . . . .	1 851	2 815	1 277	1 238	45	75	48	7 351
Other . . . . .	165	1 456	49	78	8	122	7	1 884
Total . . . . .	4 500	6 200	2 566	3 266	193	248	72	17 046
LOAN FUNDS								
Receipts, loan raisings, etc.	22	946	700	976	—	—	30	2 674
Payments (c) . . . . .	49	1 303	571	1 589	10	—	—	3 522

(a) Includes interest receipts, sundry licences, fines and discounts received.

(b) Excludes amounts applied from reserves for capital purposes.

(c) Includes amounts applied from reserves for capital purposes.

The principal sources of revenue of the port authorities are shipping tonnage rates and import and export wharfage rates; other sources are charges for pilotage services and the hiring of equipment. Expenditure is summarised under the heading 'works and services' which includes the provision of ordinary port services (e.g. pilotage, tug assistance, etc.), the maintenance of the port (e.g. dredging, etc.) and the improvement of the port (e.g. new wharves, new berths, etc.). To raise the additional funds required to finance port improvements, the authorities borrow money subject to State Treasury approval, the Treasury acting on behalf of the Australian Loan Council.

The next table summarises the transactions of all port authorities for recent years:



**Port Authorities, Tasmania**  
**Receipts and Expenditure: Summary**  
**(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>REVENUE FUNDS</b>						
<b>Receipts—</b>						
Wharfage charges .....	4 830	5 455	5 865	7 162	7 466	8 235
Other service charges .....	2 602	4 580	4 771	4 587	6 802	6 830
Plant hire .....	1 562	1 686	1 903	2 301	2 213	2 305
Government grants .....	48	87	27	—	32	117
Other (a) .....	1 117	627	588	989	1 559	1 134
<b>Total .....</b>	<b>10 159</b>	<b>12 435</b>	<b>13 154</b>	<b>15 039</b>	<b>18 072</b>	<b>18 621</b>
<b>Payments (b)—</b>						
Administration .....	1 146	1 664	1 800	2 000	1 939	2 086
Debt charges—						
Interest .....	1 961	2 194	2 712	2 792	3 129	3 531
Redemption and sinking fund contributions .....	1 401	1 515	1 717	1 939	2 452	2 193
Works and services .....	3 785	5 031	6 162	6 022	7 891	7 351
Other .....	1 017	910	1 217	1 623	1 354	1 884
<b>Total .....</b>	<b>9 310</b>	<b>11 314</b>	<b>13 608</b>	<b>14 376</b>	<b>16 765</b>	<b>17 046</b>
<b>LOAN FUNDS</b>						
<b>Receipts—</b>						
Loan raisings .....	3 061	2 930	3 835	3 875	3 880	2 280
Other .....	6	285	199	293	303	394
<b>Total .....</b>	<b>3 067</b>	<b>3 215</b>	<b>4 034</b>	<b>4 168</b>	<b>4 183</b>	<b>2 674</b>
<b>Payments (c) .....</b>	<b>3 150</b>	<b>4 693</b>	<b>5 700</b>	<b>3 862</b>	<b>4 597</b>	<b>3 522</b>

(a) Includes interest receipts, sundry licences, fines and discounts received.

(b) Excludes amounts applied from reserves for capital purposes.

(c) Includes amounts applied from reserves for capital purposes.

The following table gives the loan debts of port authorities at the end of each financial year for recent years:

**Port Authorities**  
**Loan Debt of Principal Authorities at End of Year**  
**(\$'000)**

Authority	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Hobart .....	8 399	9 721	11 256	12 819	13 333	12 616
Launceston .....	9 219	9 412	9 487	9 803	9 936	10 094
Devonport .....	7 374	7 589	8 290	8 262	8 737	9 093
Burnie .....	12 377	12 083	11 974	12 205	13 280	13 871
Other .....	1 287	1 328	1 368	1 339	1 296	(a) 1 368
<b>Total .....</b>	<b>38 656</b>	<b>40 133</b>	<b>42 375</b>	<b>44 428</b>	<b>46 582</b>	<b>47 042</b>

(a) Comprised: Circular Head, \$998 000; Flinders Island, \$196 000; King Island, \$174 000.

The next table summarises annual borrowings, aggregate debt and the provision for loan redemption for recent years:

**Port Authorities, Tasmania**  
**Loan Raisings, Loan Debt and Provisions for Redemption**  
**(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Loan raisings during year (a).....	3 061	2 930	3 835	3 875	3 880	2 280
Loan debt at 30 June.....	38 656	40 133	42 375	44 428	46 582	47 042
Provisions for loan redemption at 30 June (b).....	1 315	1 507	1 622	1 733	1 943	2 392

(a) No loans were raised from the State Government during the period covered by the table.

(b) Balance of sinking funds and loan redemption provision accounts at end of year.

## SHIPPING AT TASMANIAN PORTS

### System of Record

The shipping statistics contained in this section were compiled on a new basis from 1 July 1966 and are not fully comparable with statistics published for previous periods. Prior to this date shipping statistics were compiled from details assembled and supplied by the Department of Customs and Excise and by State port authorities. Since 1966-67 Tasmanian shipping statistics have been compiled from details submitted by shipping companies or their representatives, through the Australian Bureau of Customs, for each arrival and each departure of a vessel. Not all vessels which arrived at, and departed from, ports in Tasmania are included in the new series of shipping statistics; the following are now excluded:

- (i) naval vessels;
- (ii) yachts and other craft used for pleasure;
- (iii) foreign fishing vessels that neither load nor discharge cargo;
- (iv) Australian-registered fishing vessels operating from Tasmanian ports;
- (v) geographical, seismic and oceanographic survey vessels;
- (vi) offshore oil drilling rigs and vessels servicing them; and
- (vii) vessels of 200 registered net tons and under.

### *Movements of Vessels*

The inward and outward movements of vessels using Tasmanian ports were classified according to type of voyage and not according to the type of vessel prior to 1969-70. Each movement of a vessel was allocated to one of the following:

- (i) overseas direct;
- (ii) overseas via other state;
- (iii) interstate direct;
- (iv) overseas via port in Tasmania;
- (v) interstate via port in Tasmania; and
- (vi) intrastate.

Addition of the first three classifications (overseas and interstate movements) gives an unduplicated total for Tasmania. The inclusion of the other three classifications (intrastate or coastal movements) must be taken into account to reflect the volume of shipping arriving at, or departing from, individual ports in Tasmania.

However, in 1969-70, it was decided that classification by type of voyage alone was unsatisfactory in two particular categories, namely:

- (ii) overseas via other state; and
- (iii) interstate direct.

While vessels confining their operations to Australian waters could never be associated with category (ii), it was nevertheless possible for vessels engaged in overseas voyages to undertake movements classified under category (iii). For example, a ship bound for the U.K.

could be sailing Sydney-Hobart-Melbourne-London. The arrival in Hobart under the pre-1969-70 classification, could be called 'interstate direct' as would the arrival in Melbourne.

For 1969-70 and following years, the classification was varied so that categories (ii) and (iii) are based on the type of vessel, not on the type of movement. Thus, in terms of the previous example, the U.K.-bound ship's arrival both in Hobart and Melbourne would be classified 'overseas via other state', and not 'interstate direct'.

### Tonnage of Vessels

Statistics of vessels are compiled in terms of registered net tonnage. This is an international unit of measurement of a vessel's carrying capacity. (There is no recognised equivalent of net tonnage in the metric system.) Net tonnage is expressed in units of 100 cubic feet (2.8 cubic metres) (i.e. 100 cubic feet equals 1 net ton) and it represents the volume of enclosed space which can be utilised for cargo or passengers.

## Overseas and Interstate Shipping

### Vessels Entered Tasmanian Ports

The classification 'overseas' in the following table is now much more meaningful since, from 1969-70, the category 'interstate direct' is not used to describe movements of ships engaged in overseas travel voyaging from one Australian state to another; the category now used is 'overseas via other state'. The details are also restricted to entries classified as overseas and interstate movements and in each case the figures are lower than those shown in a later table which includes intrastate movements.

Vessels Entered Ports in Tasmania (a), 1977-78

Port of entry	Overseas				Interstate direct		Total vessels entered	
	Direct		Via other state					
	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)
Hobart .....	62	694	135	476	189	473	386	1 644
Burnie .....	8	39	64	636	178	526	250	1 202
Grassy .....	—	—	—	—	22	5	22	5
Devonport .....	8	29	13	43	335	993	356	1 066
Lady Barron .....	—	—	—	—	—	—	—	—
Launceston .....	53	1 137	66	273	281	992	400	2 402
Stanley .....	28	606	1	8	85	61	114	674
Total .....	159	2 506	279	1 437	1 090	3 050	1 528	6 992

(a) Excludes intrastate shipping.

The next table gives a six-year summary:

Shipping: Overseas and Interstate (a), Summary  
Vessels Entered Ports in Tasmania

Year	Overseas				Interstate direct		Total vessels entered	
	Direct		Via other state					
	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)	No.	Net tons ('000)
1972-73 .....	172	2 156	308	1 531	1 308	3 552	1 788	7 239
1973-74 .....	173	2 703	238	1 435	1 220	3 085	1 631	7 223
1974-75 .....	190	2 669	260	1 224	1 161	2 928	1 611	6 820
1975-76 .....	163	2 457	340	1 373	1 033	2 903	1 536	6 733
1976-77 .....	157	2 506	351	1 535	1 084	3 218	1 592	7 258
1977-78 .....	159	2 506	279	1 437	1 090	3 050	1 528	6 992

(a) Excludes intrastate shipping.

The following table has been compiled to show the country of registration of vessels entering all ports in Tasmania. The number of vessels and net tonnage figures shown in this table cannot be added to arrive at a State total as some vessels may have called at two or more ports within the State during the same voyage and are therefore subject to double, triple, etc., counting.

Country of Registration of Vessels Entered Tasmanian Ports: Overseas, Interstate and Intrastate

Country of registration	Vessels entered Tasmanian ports					
	1975-76		1976-77		1977-78	
	Number	Net tons	Number	Net tons	Number	Net tons
Algeria	—	—	1	11 862	—	—
Argentina	1	6 151	—	—	—	—
Australia	1 209	3 607 816	1 274	3 858 878	1 245	3 682 214
Belgium-Luxembourg	2	5 282	—	—	1	2 963
Bermuda	—	—	1	24 041	2	22 948
Brazil	1	2 705	2	12 175	—	—
Canada	—	—	1	12 205	—	—
China—People's Republic of	—	—	—	—	1	5 445
China—Taiwan Prov. only	—	—	1	12 091	—	—
Cyprus	—	—	1	1 939	—	—
Denmark	6	25 412	7	24 837	10	69 661
Finland	—	—	1	10 468	—	—
Germany, Fed. Repub. of	9	23 432	8	59 305	3	11 233
Greece	13	191 014	20	172 170	13	112 023
Hong Kong	1	13 977	2	14 610	13	126 593
India	4	22 641	9	69 447	6	28 016
Indonesia	1	2 441	—	—	—	—
Israel	2	7 915	—	—	—	—
Italy	2	25 178	—	—	—	—
Japan	66	990 283	76	1 211 083	68	1 019 396
Korea, Republic of	—	—	—	—	1	1 315
Kuwait	—	—	—	—	2	6 314
Liberia	49	820 733	42	647 512	56	895 715
Maldives, Republic of	3	3 251	—	—	—	—
Morocco	—	—	—	—	1	1 240
Netherlands	17	79 576	16	70 506	3	15 288
New Zealand	13	24 882	14	25 565	16	35 452
Norway	17	205 680	14	157 257	9	103 459
Panama	35	401 133	45	612 876	47	623 522
Papua New Guinea	—	—	1	360	—	—
Poland	11	47 653	8	37 317	8	38 339
Sabah	—	—	—	—	9	61 742
Singapore	24	63 855	14	47 223	12	46 485
Sweden	9	52 453	9	83 268	4	23 691
Tonga	19	7 733	20	8 696	31	13 173
United Kingdom	224	616 481	157	518 099	144	497 757
United States of America	24	426 472	19	332 942	11	194 556
U.S.S.R.	15	55 908	9	21 559	15	29 164
Yugoslavia	4	23 172	4	22 590	5	22 653
Other	—	—	—	—	1	6 205

The next table shows the number and net tonnage of vessels which entered individual Tasmanian ports during 1977-78. The names of ports in this table refer to the cities or towns in which the controlling port authorities are located:

- (i) 'Hobart' includes Port Huon, Port of Spring Bay and Strahan;
- (ii) 'Launceston' includes Bell Bay, Long Reach and Inspection Head;
- (iii) 'Devonport' includes Ulverstone;
- (iv) 'Stanley' includes Port Latta;
- (v) 'Grassy' includes Naracoopa and Currie; and
- (vi) 'Lady Barron' includes Whitemark.

A State total of number of vessels entered and their net tonnage cannot be obtained from the next table by adding the port totals since vessels falling within the categories 'overseas via other Tasmanian port', 'interstate via other Tasmanian port' and 'intrastate' will be counted at each port of entry as a 'vessel entered'.

**Shipping: Overseas, Interstate and Intrastate Vessels Entered Tasmanian Ports, 1977-78**

Port (a) of entry and type of service (b)	Vessels entered					
	With cargo		In ballast		Total	
	Number	Net tons	Number	Net tons	Number	Net tons
<b>Hobart—</b>						
Overseas direct .....	23	129 818	39	564 579	62	694 397
Overseas via other state .....	111	353 440	24	122 612	135	476 052
Overseas via other Tasmanian port ..	8	10 103	1	2 432	9	12 535
Interstate direct .....	161	384 220	28	89 155	189	473 375
Intrastate .....	16	83 355	3	10 605	19	93 960
Total Hobart .....	319	960 936	95	789 383	414	1 750 319
<b>Burnie—</b>						
Overseas direct .....	3	22 257	5	17 009	8	39 266
Overseas via other state .....	59	588 997	5	47 370	64	636 367
Overseas via other Tasmanian port ..	6	40 403	—	—	6	40 403
Interstate direct .....	137	434 556	41	91 562	178	526 118
Interstate via other Tasmanian port ..	54	192 584	—	—	54	192 584
Intrastate .....	7	29 491	18	69 719	25	99 210
Total Burnie .....	266	1 308 288	69	225 660	335	1 533 948
<b>Devonport—</b>						
Overseas direct .....	1	4 118	7	25 010	8	29 128
Overseas via other state .....	9	25 608	4	17 597	13	43 205
Interstate direct .....	270	903 257	65	90 041	335	993 298
Interstate via other Tasmanian port ..	16	137 264	—	—	16	137 264
Intrastate .....	6	9 647	—	—	6	9 647
Total Devonport .....	302	1 079 894	76	132 648	378	1 212 542
<b>Launceston—</b>						
Overseas direct .....	9	85 008	44	1 052 216	53	1 137 224
Overseas via other state .....	58	223 217	8	49 907	66	273 124
Overseas via other Tasmanian port ..	5	5 144	4	4 318	9	9 462
Interstate direct .....	280	991 563	1	286	281	991 849
Interstate via other Tasmanian port ..	9	49 632	—	—	9	49 632
Intrastate .....	11	6 679	6	2 211	17	8 890
Total Launceston .....	372	1 361 243	63	1 108 938	435	2 470 181
<b>Stanley—</b>						
Overseas direct .....	1	10 051	27	595 465	28	605 516
Overseas via other state .....	1	7 842	—	—	1	7 842
Interstate direct .....	82	60 148	3	621	85	60 769
Interstate via other Tasmanian port ..	7	12 420	—	—	7	12 420
Intrastate .....	3	621	—	—	3	621
Total Stanley .....	94	91 082	30	596 086	124	687 168
<b>Grassy—</b>						
Interstate direct .....	22	4 554	—	—	22	4 554
Interstate via other Tasmanian port ..	9	1 863	—	—	9	1 863
Intrastate .....	6	12 213	6	21 486	12	33 699
Total Grassy .....	37	18 630	6	21 486	43	40 116
<b>Lady Barron—</b>						
Intrastate .....	7	2 002	1	286	8	2 288
Total Lady Barron .....	7	2 002	1	286	8	2 288

(a) See introduction to this table.

(b) Type of service is defined under 'Movements of Vessels' at the beginning of this section.

The following table shows, in summary form, the number and net tonnage of vessels which entered Tasmanian ports during the last three years, by port:

**Shipping: Overseas, Interstate and Intrastate Vessels Entered Tasmanian Ports**

Port (a) of entry	1975-76		1976-77		1977-78	
	Number	Net tons	Number	Net tons	Number	Net tons
Hobart .....	463	2 051 107	396	1 640 814	414	1 750 319
Burnie .....	366	1 568 520	366	1 687 919	335	1 533 948
Devonport .....	361	1 143 540	405	1 311 830	378	1 212 542
Launceston .....	386	2 210 714	421	2 650 692	435	2 470 181
Stanley .....	141	739 755	139	767 642	124	687 168
Grassy .....	57	37 535	43	19 872	43	40 116
Lady Barron .....	7	2 058	6	2 112	8	2 288

(a) See explanation in introduction to previous table.

### Cargo Handled at Tasmanian Ports

In the next table, details are given of the cargo handled at each port in Tasmania. The classifications 'overseas' and 'interstate' relate either to the origin or destination of the cargo.

Cargo handled at ports is recorded either in terms of units of weight or units of volume, depending on the basis on which freight is charged. In the following tables separate details are shown in tonnes for cargo that was recorded in units of weight, and in cubic metres for cargo that was recorded in units of volume.

**Cargo Discharged and Shipped (a)  
(Individual Tasmanian Ports, 1977-78)**

Port	Overseas		Interstate		Total	
	Tonnes	Cubic metres	Tonnes	Cubic metres	Tonnes	Cubic metres

#### CARGO DISCHARGED

Hobart .....	114 757	21 769	621 138	270 114	735 895	291 883
Burnie .....	45 501	8 744	281 021	281 440	326 522	290 184
Grassy .....	—	—	4	9 147	4	9 147
Devonport .....	3 896	161	158 866	570 505	162 762	570 666
Lady Barron .....	—	—	—	—	—	—
Launceston .....	80 850	6 705	772 119	535 023	852 969	541 728
Stanley .....	19 038	—	32 567	27 516	51 605	27 516
Total .....	264 042	37 379	1 865 715	1 693 745	2 129 757	1 731 124

#### CARGO SHIPPED

Hobart .....	647 645	—	430 505	229 354	1 078 150	229 354
Burnie .....	188 924	1 346	388 629	253 062	577 553	254 408
Grassy .....	—	—	1 531	6 756	1 531	6 756
Devonport .....	18 284	23 936	207 970	574 904	226 254	598 840
Lady Barron .....	—	—	—	—	—	—
Launceston .....	1 407 227	3 583	148 341	383 470	1 555 568	387 053
Stanley .....	1 887 295	—	1 630	36 735	1 888 925	36 735
Total .....	4 149 375	28 865	1 178 606	1 484 281	5 327 981	1 513 146

(a) Cargo statistics are compiled in terms of either weight or volume units of measurement depending upon the details originally reported. It is therefore *not* possible to provide statistics for total cargo using a single unit of measurement.

The following table gives a summary of overseas and interstate cargo discharged and shipped at Tasmanian ports for recent years:

## Cargo Discharged and Shipped, All Tasmanian Ports (a)

Year	Overseas		Interstate		Total	
	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres	Tonnes weight	Cubic metres
DISCHARGED						
1972-73 .....	516 891	18 883	1 684 286	1 438 171	2 201 177	1 457 054
1973-74 .....	508 988	13 690	1 574 158	1 520 697	2 083 146	1 534 387
1974-75 .....	483 644	33 867	1 666 193	1 592 071	2 149 837	1 625 938
1975-76 .....	281 036	16 724	1 721 764	1 643 943	2 002 800	1 660 667
1976-77 .....	338 739	22 656	1 777 302	1 743 229	2 116 041	1 765 885
1977-78 .....	264 042	37 379	1 865 715	1 693 745	2 129 757	1 731 124
SHIPPED						
1972-73 .....	4 417 232	37 232	1 237 236	1 181 601	5 654 468	1 218 833
1973-74 .....	4 891 948	67 779	1 283 131	1 316 286	6 175 079	1 384 065
1974-75 .....	4 309 155	87 523	1 122 309	1 386 133	5 431 464	1 473 656
1975-76 .....	3 969 001	26 871	1 167 523	1 413 021	5 136 524	1 439 892
1976-77 .....	4 363 483	18 338	1 191 644	1 524 774	5 555 127	1 543 112
1977-78 .....	4 149 375	28 865	1 178 606	1 484 281	5 327 981	1 513 146

(a) Statistics for total cargo using a single unit of measurement are not available.

## TRANSPORT COMMISSION

## Functions of the Commission

The main functions of the Transport Commission are as follows:

- (i) administration of the *Traffic Act* and regulations concerning traffic control and facilities;
- (ii) traffic engineering associated with the control of traffic;
- (iii) registration and taxation of motor vehicles;
- (iv) regulation and licensing of commercial goods vehicles;
- (v) regulation and licensing of taxi and hire cars;
- (vi) regulation and licensing of privately operated coach and omnibus services;
- (vii) testing and licensing of drivers of motor vehicles;
- (viii) operation of a State-owned shipping service between Stanley/King Island/Melbourne;
- (ix) operation of the Bruny Island ferry service;
- (x) administration of aerodromes under the control of the State Government; and
- (xi) operation of an engineering workshop at Launceston (known as the 'Precision Tool Annexe'; new machines for this workshop have recently been obtained from Japan).

In brief, the Transport Commission emerges as a business undertaking, an administrative body and a taxing authority.

## Control of the Commission

The Commission, by section 6 (2) of the *Transport Act* 1938, is absolutely free from political control except that the Minister for Transport may, under Section 33, appeal to the Governor if dissatisfied with decisions of the Commission. Section 34 allows the Governor, as a form of assistance to industry in certain cases, to direct the Commission to reduce freight charges but, to the extent that such direction causes a revenue loss, the Treasurer is obliged to reimburse the Commission; the formula for reimbursement requires either acceptance of the Commission's original charges as the economic cost of the service or substitution of the Auditor-General's calculation of the economic cost, should the level of the Commission's original charges be considered uneconomic by the Auditor-General.



**Financial Operations**

The revenue of the Commission comes from two main sources: (i) its own business undertakings—shipping services and an engineering plant ('Precision Tool Annexe'); and (ii) grants from Consolidated Revenue.

The financial transactions of the Commission are summarised in the tables that follow. For simplicity of presentation the transactions are arranged in two sets of accounts, firstly Trading and Profit and Loss and secondly Taxation, Licensing, etc. It should be noted that the net loss in the trading and profit and loss account for any year becomes a charge on Consolidated Revenue in the following year; also that the proceeds from motor taxation, registration, licensing, etc. are passed to Consolidated Revenue, the Commission being reimbursed the cost of collecting such revenues and the costs and expenses incurred in connection with the provision and maintenance of facilities for the control of motor traffic.

**Transport Commission, Tasmania: Trading and Profit and Loss Account**  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
<b>REVENUE</b>					
Railways (a) .....	8 698	—	—	—	—
Coastal shipping .....	1 271	1 415	2 068	2 056	2 243
Bruny Island ferry .....	72	81	102	92	99
Trans-Derwent ferry .....	236	501	594	220	—
Tool annexe .....	554	720	841	1 137	1 146
Other revenue .....	295	399	513	542	638
Net loss (b) .....	18 187	4 537	3 919	3 107	3 549
<b>Total .....</b>	<b>29 313</b>	<b>7 654</b>	<b>8 037</b>	<b>7 154</b>	<b>7 675</b>
<b>EXPENDITURE</b>					
Railways (a) .....	23 652	—	—	—	—
Coastal shipping .....	3 661	4 293	3 889	3 364	3 362
Bruny Island ferry .....	200	346	403	514	680
Trans-Derwent ferry .....	218	1 030	1 102	330	—
Tool annexe .....	558	742	842	1 164	1 395
General expenditure .....	1 025	1 243	1 801	1 782	2 237
<b>Total .....</b>	<b>29 313</b>	<b>7 654</b>	<b>8 037</b>	<b>7 154</b>	<b>7 675</b>

(a) State railway system controlled by the Transport Commission up to 30 June 1975.

(b) To be charged against Consolidated Revenue in the following year.

The remaining transactions can be summarised as follows (road safety accounts are excluded):

**Transport Commission, Tasmania: Motor Taxation Collection, Licensing, etc.**  
(\$'000)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
<b>REVENUE</b>					
Motor tax .....	6 379	8 371	10 324	12 687	14 441
Public vehicle licensing, fees, etc. ....	452	623	917	1 122	1 039
Registration, licences, etc. ....	2 346	3 358	4 158	4 345	4 831
Refunds of stamp duty .....	-3	-4	-4	-4	-7
Stamp duty on vehicle registrations .....	1 873	2 797	3 429	3 683	4 393
Transfers from Consolidated Revenue—					
Road transport administration .....	1 170	1 491	1 741	2 024	2 186
Traffic engineering section .....	595	692	879	1 173	1 038
<b>Total .....</b>	<b>12 812</b>	<b>17 328</b>	<b>21 444</b>	<b>25 030</b>	<b>27 921</b>

**Transport Commission, Tasmania: Motor Taxation Collection, Licensing, etc.—continued**  
(\$'000)

Particulars	1975-76	1976-77	1977-78	1978-79
<b>EXPENDITURE</b>				
Profit and loss account (transfers) (a) .....	104	101	96	100
Paid to Consolidated Revenue .....	15 041	18 723	21 737	24 597
Administration, traffic control, etc. ....	2 176	2 623	3 197	3 224
Total .....	17 321	21 447	25 030	27 921

(a) Receipts from public vehicle licensing paid into profit and loss account.

### Annual Loss

In 1968-69 and earlier years the Commission received two grants from Consolidated Revenue: (i) reimbursement of the previous year's loss; and (ii) a grant equal to State Land Tax collections. From 1969-70, the loss incurred by the Commission for the previous year has been reimbursed by a single grant from Consolidated Revenue (\$3 548 892, the loss for 1978-79 reimbursed during 1979-80). The accounts reveal that the Commission's net loss has occurred principally in respect of the Coastal Shipping Services from 1975-76.

### Transport Commission Shipping Services

The Transport Commission operates a coastal shipping service between King Island, Stanley and Melbourne and a vehicular ferry service to Bruny Island. During 1978-79 the coastal service was operated by the *Straitsman*. In that year the shipping services carried 24 831 sheep, 26 679 cattle, 968 pigs and 127 425 tonnes of general cargo. A total of 312 voyages provided essential services to and from King Island and between Stanley and Melbourne.

On the Bruny Island service the *Harry O'May* has become the primary vessel after re-engining and re-conversion to a vehicular ferry. The *Harry O'May* joined the service in March 1978 when the *Melba* was withdrawn and placed for sale. The ferry *Mangana* is now the back-up vessel for this service. The ramps at Kettering and Barnes Bay have been upgraded to accommodate the *Harry O'May*. Modifications have also been carried out on the *Mangana* to make her better suited to the ramps. The construction of new terminals at Kettering and Roberts Point (on Bruny Island) is planned. When these are completed the crossing will be considerably shortened and the frequency of service improved.

## RAILWAYS

### General

Tasmania has a 1 067-millimetre gauge government railway system based on a route network of 864 kilometres. A private railway of 134 kilometres is operated by the Emu Bay Railway Company Ltd between Burnie and Melba Siding (19 kilometres south of Rosebery).

The first Tasmanian railway was the 72 kilometre Deloraine to Launceston line opened in 1871. A 196 kilometre line from Hobart to Western Junction began operating in 1876. (For a brief historical account of the development of the Tasmanian railway system see this section of the 1977 *Year Book*. Chapter 1 of the same edition includes an article on the construction of the main line railway from Hobart to Launceston.)

### *Federal Takeover*

Following negotiations with the Federal Government, the State Government passed the *Railways (Transfer to Commonwealth) Act 1975* which provided for the transfer of control of the State's railway system to the Federal Government with effect from 1 July 1975.

Under the agreement the State retained the following rights: (i) to consult with the Federal Government on any proposals to increase freight rates; (ii) to dispute the abolition of any service where in the opinion of the State Government that service is desirable; and (iii) to consult with the Federal Government on the operation of new or existing railways which are of particular concern to the State. The State was also granted representation on the Australian National Railways Commission and the Australian Shipping Commission for an initial period of five years.

#### *Committee of Inquiry*

In September 1976, the Federal Government appointed a committee of inquiry (the 'Joy Committee') to investigate Tasmanian rail operations. The Committee's report was released in November 1976 and a summary of it is included at the end of Chapter 11 in the 1978 *Year Book*.

#### **Operating and Financial Statistics**

Tables giving details of gross earnings and working expenses and of the number of employees, and wages and salaries paid for recent years up to 1975-76 are included in the 1978 and 1979 editions of the *Year Book*. A table showing operating statistics until 1976-77 can be found on page 307 of the 1980 edition of the *Year Book*. However, later statistics have still not been made available by the Australian National Railways Commission. (In 1975-76 the Commission's Tasmanian railways made gross earnings of \$8.05m and incurred working expenses of \$22.09m, leaving a deficit of \$14.04m. During 1976-77, 140 000 passenger journeys were made and 1 644 000 tonnes of goods and livestock carried by the Government Railways in Tasmania.)

### **METROPOLITAN TRANSPORT TRUST**

The only Government road services in operation since 8 December 1968 (when the Transport Commission road services were discontinued) have been those operated by the Metropolitan Transport Trust at Hobart, Launceston and Burnie. Prior to this date the Transport Commission operated omnibus services throughout the State.

The present service is based entirely on motor buses although trolley-buses were in use on some Hobart and Launceston routes as late as 1968. It was in October 1960 that the Trust closed down the last of the tramway services in Hobart; Launceston City had closed down all its tramway services before the city transport system was taken over by the Trust in July 1955. Increasing motor vehicle ownership provides formidable competition to attracting passengers to urban public transport. Despite a slight increase in the number of passenger journeys in 1974-75, a trend of diminishing patronage has been evident during the years 1975-76 to 1978-79.

#### *Financial Operations of Trust*

The following table shows the income and expenditure of the Metropolitan Transport Trust for recent years:

**Metropolitan Transport Trust, Tasmania**  
**Income and Expenditure**  
**(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
INCOME						
Traffic operations .....	2 698	2 844	2 865	2 731	3 395	4 021
Other earnings .....	52	72	135	131	151	165
Subsidy, State Government	2 520	3 957	5 156	6 030	6 615	6 520
Total .....	5 270	6 873	8 156	8 892	10 161	10 706

**Metropolitan Transport Trust, Tasmania—continued**  
**Income and Expenditure—continued**  
**(\$'000)**

EXPENDITURE						
Traffic operations .....	3 025	3 961	4 390	4 659	5 013	5 150
Maintenance .....	800	1 066	1 261	1 393	1 532	1 705
Power and fuel .....	310	370	451	443	532	647
Workshop and stores .....	71	90	119	146	184	190
Administration and general .....	764	1 080	1 358	1 562	2 080	2 151
Debt charges .....	143	148	205	282	308	298
Depreciation charges .....	169	183	301	461	504	531
Total .....	5 283	6 897	8 084	8 945	10 153	10 672

A break-down of income earned from traffic operations in the three centres for 1978-79 (in \$'000) is as follows: Hobart, 3 069; Launceston, 719, and Burnie, 233.

### *Loan Debt of Trust*

Net advances to the Trust from the State Loan Fund at 30 June 1979 stood at \$4 173 585.

### *Operating Statistics*

The next table shows the principal operating statistics for the Metropolitan Transport Trust for recent years:

**Metropolitan Transport Trust, Tasmania**  
**Operating Statistics**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Route-kilometres (a) .....	407	459	453	454	461	462
Vehicle-kilometres ... '000	8 618	9 091	9 487	9 617	9 979	9 562
Passenger journeys ... '000	19 515	20 589	20 512	19 773	19 517	17 299
Fare income per passenger journey (b).....\$	0.14	0.14	0.14	0.14	0.17	0.22
Working expenses per passenger journey (c) ..\$	0.25	0.32	0.37	0.41	0.48	0.57

(a) At end of period.

(b) Income from fares only—excludes other revenue.

(c) Excludes debt charges and depreciation.

At 30 June 1979 the Metropolitan Transport Trust had a fleet of 325 vehicles comprising 304 passenger buses and 21 maintenance vehicles. Disposition of the fleet was: Hobart, 220 passenger buses and 15 maintenance vehicles; Launceston, 63 passenger buses and five maintenance vehicles; and Burnie, 21 passenger buses and one maintenance vehicle.

## ROADS AND BRIDGES

### Scope

The details relating to roads in the following section refer to:

- (i) 'classified' roads;
- (ii) roads of local government authorities; and
- (iii) roads of other government authorities.

A further qualification is that the roads are those normally open to traffic.

### Definitions and Road Lengths

(i) *Classified Roads*: These are roads for which the State Government accepts direct responsibility, the construction and maintenance authority being the Department of Main Roads (previously the Public Works Department). The length of classified (or State) roads at 30 June 1979 was 3 664 kilometres (see later section for further details).

(ii) *Roads of Local Government Authorities*: The length of roads for which local government authorities accepted responsibility at 30 June 1979 totalled 12 774 kilometres.

(iii) *Roads of Other Authorities*: Roads which were the responsibility of these authorities at 30 June 1979 comprised: roads of the Hydro-Electric Commission, 585 kilometres; Forestry Commission, 4 653 kilometres; total 5 238 kilometres. The Hydro-Electric Commission roads include the Gordon River Road from Maydena to the Gordon River Dam site (85 kilometres) and the Scotts Peak Road which runs from the Gordon River Road to Scotts Peak Dam (35 kilometres).

Apart from some new arterial roads constructed by the Department of Main Roads (e.g. Hobart's southern and eastern outlets), works performed by the Department and local government authorities are almost entirely in the upgrading of existing roads or tracks to a higher standard and the maintenance of existing road standards. Recent construction of roads where no previous route existed has been predominantly attributable to the Forestry Commission in its development of forest areas for commercial use, and to the Hydro-Electric Commission in providing access to power development construction sites. The main areas where the Commission's activities have already affected the road systems are in the upper Derwent; Great Lake; Mersey Valley; the Gordon and Pedder Lakes; and the Pieman River areas.

### Surface of Roads

The following table shows lengths of all roads normally open to traffic classified according to road surface and according to the level of government which accepts responsibility for their construction and maintenance. The proportion of classified (State) roads with sealed surfaces has increased from 72.2 per cent at 30 June 1967 to 87.1 per cent in June 1979.

Length of Roads According to Nature of Surface, Tasmania at 30 June

Type of surface	1974	1975	1976	1977	1978	1979 (a)
CLASSIFIED STATE ROADS						
Sealed (b) ..... km	3 013	3 120	3 159	3 188	3 256	3 216
Unsealed (c) ..... km	503	487	452	457	439	448
Total ..... km	3 516	3 606	3 611	3 645	3 695	3 664
Sealed ratio (d) ..... %	85.7	86.5	87.5	87.5	88.1	87.8
ROADS OF LOCAL GOVERNMENT AUTHORITIES						
Sealed (b) ..... km	3 552	3 697	3 849	3 998	4 013	3 848
Unsealed (c) ..... km	9 311	9 126	9 003	8 816	8 801	8 926
Total ..... km	12 862	(e) 12 823	12 852	12 814	12 814	12 774
Sealed ratio (d) ..... %	27.6	28.8	29.9	31.2	31.3	30.1
ROADS OF OTHER AUTHORITIES						
Sealed (b) ..... km	151	121	121	122	113	132
Unsealed (c) ..... km	4 239	4 442	4 744	5 255	5 604	5 106
Total ..... km	4 390	4 564	4 865	5 377	5 717	5 238
Sealed ratio (d) ..... %	3.4	2.7	2.5	2.3	2.0	2.5

Length of Roads According to Nature of Surface, Tasmania at 30 June—continued

Type of surface	1974	1975	1976	1977	1978	1979 (a)
ALL ROADS						
Sealed (b) ..... km	6 716	6 937	7 129	7 308	7 382	7 196
Unsealed (c) ..... km	14 052	14 055	14 199	14 528	14 844	14 480
Total ..... km	20 767	20 993	21 328	21 835	22 226	21 676
Sealed ratio (d) ..... %	32.3	33.0	33.4	33.5	33.2	33.2

(a) Decreases are due to revision of figures by the Department of Main Roads.

(b) Bitumen or concrete.

(c) Includes roads formed or cleared only.

(d) Sealed roads as a proportion of total roads.

(e) The reduction in length of local government roads in 1975 resulted mainly from a transfer of part of the road systems of the Brighton and Richmond municipalities to the State (classified) roads, in order to form part of the new road links made necessary by the collapse of the Tasman Bridge.

### Classified (or State) Roads

The next table analyses the length of classified roads according to their description and surface. The principal State highways include the following: (i) *Arthur* (74 kilometres), from Sorell to Port Arthur; (ii) *Bass* (282 kilometres), from Launceston to Marrawah in the far north-west; (iii) *Channel* (95 kilometres), from Hobart to Huonville, via D'Entrecasteaux area and Cygnet; (iv) *Huon* (99 kilometres), from Hobart to Hythe via Longley and Huonville; (v) *Lake* (150 kilometres), from Deloraine via Great Lake to Melton Mowbray; (vi) *Lyell* (284 kilometres), from Granton, near Hobart, to Strahan; (vii) *Midland* (184 kilometres), from Glenorchy to Launceston; (viii) *Murchison* (78 kilometres), linking the Zeehan and Waratah Highways; (ix) *Tasman* (422 kilometres), from Hobart to Launceston, via east coast and St Helens; (x) *Waratah* (72 kilometres), from Somerset to Waratah.

Classified (or State) Roads, Tasmania  
Description and Length of Roads at 30 June 1979  
(Kilometres)

Description	Nature of surface		Total
	Sealed (a)	Unsealed (b)	
Highways .....	1 855	103	1 958
Main roads .....	995	144	1 139
Secondary roads .....	194	95	289
Tourist roads .....	69	81	150
Developmental roads .....	103	25	128
Total .....	3 216	448	3 664

(a) Bitumen or concrete.

(b) Gravel or stone.

### Expenditure on Roads and Bridges

As indicated earlier in this section, the responsibility for road construction and maintenance is placed upon the State Government, local government authorities and two public enterprises. The next table gives an analysis of funds available to the State Government for roadworks and of expenditure from State road funds.

Federal Government Road Grants provide the bulk of the funds with a major contribution also coming from motor vehicle taxation, registration fees, etc.

**State Road Funds, Tasmania: Receipts and Payments (a)**  
(\$'000)

Particulars	1976-77	1977-78	1978-79
<b>RECEIPTS</b>			
State Government source—			
Motor vehicle and drivers taxation .....	11 030	13 379	15 417
Road maintenance contributions, taxes and charges .....	210	183	179
Loans (b) .....	10 836	9 722	12 188
Other .....	3 465	4 072	4 017
Federal Government grants .....	25 374	23 973	24 709
Contributions by local government authorities .....	17	17	18
<b>Total .....</b>	<b>r 50 932</b>	<b>51 346</b>	<b>56 528</b>
<b>PAYMENTS</b>			
Construction and reconstruction of roads and bridges .....	38 770	37 352	40 403
Maintenance of roads and bridges .....	9 380	11 616	12 453
Planning and research .....	527	658	706
<b>Total .....</b>	<b>48 677</b>	<b>49 626</b>	<b>53 562</b>

(a) Includes receipts and payments in respect of Forestry Commission and Hydro-Electric Commission roads.

(b) Includes amounts made available from the Loan Fund to the Department of Main Roads, \$3 850 000 in 1977-78 and \$4 700 000 in 1978-79, together with amounts made available to the Forestry Commission and the Hydro-Electric Commission for roadworks.

**Receipts and Expenditure, Local Government Authorities**

Some of the expenditure appearing in the State Road Funds table consists of grants from the State Government to local government authorities, although such grants are not specifically dissected. Chapter 4, 'Local Government', contains details of: (i) grants from the State to local government authorities for road purposes; (ii) road rates collected by local government authorities; and (iii) expenditure on road construction and maintenance by local government authorities from revenue, and from loan funds.

**MOTOR VEHICLE REGISTRATIONS**

**General**

Statistics in this section deal with: (i) motor vehicles 'on register' at specific dates; and (ii) new motor vehicles registered within a specified period, e.g. a year.

**Definitions**

**Register:** To be allowed on the public roads, motor vehicles, except those owned by the Federal Government, are required to be registered with the State Transport Commission; State Government vehicles, as well as privately-owned vehicles, are registered with this authority. Federal Government-owned vehicles, except those belonging to the defence services, are recorded on a separate Federal Government register. 'On the register', in this section, refers to both the State and Federal Government registration records, and to all motor vehicles except those of the defence services. Statistics of new motor vehicle registrations comply with the same definition.

**Vehicles Included:** The statistics cover cars, station wagons, motor cycles and commercial vehicles. Commercial vehicles as defined include utilities, panel vans, rigid and articulated trucks, other truck-type vehicles (i.e. commercial vehicles used for purposes other than freight carrying, e.g. campervans, tow trucks, ambulances and hearses) and omnibuses. Tractors, trailers and mobile plant and equipment are excluded.

Because of the multi-purpose nature of rear-door sedans it is possible for these types of vehicles to be registered as either cars or station wagons. Up to June 1976 all rear-door sedans were classified as cars. From July 1976 they have been classified according to the vehicle type recorded by the registration authority.



## Vehicles on Register

The following table has been compiled to show, in summary form, the increase in motor vehicles on the register since 1910. To give a convenient measure of this growth, vehicles on the register have been related to the population (vehicles per 1 000 persons), and increases have been expressed as annual averages for each decade.

Motor Vehicles on Register from 1910, Tasmania

At 30 June	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Average annual increase (a)	Per 1 000 of population
	'000	'000	'000	'000	'000	no.
1910.....	0.2	(b)	0.2	0.4	—	2
1920.....	2.4	(b)	1.7	4.1	0.4	20
1930.....	12.5	2.2	4.8	19.5	1.5	89
1940.....	17.6	5.2	3.4	26.2	0.7	109
1950.....	25.3	12.9	4.9	43.2	1.7	156
1960.....	63.7	26.4	3.1	93.2	5.0	271
1970.....	118.6	32.6	3.1	154.3	6.1	398
1979.....	178.8	42.9	4.8	226.6	(c) 8.0	542

(a) For decade ending in year shown.

(b) Included with cars and station wagons.

(c) For nine years ended 30 June 1979.

The next table gives details of motor vehicles on the register during the past six years; annual increases are shown to allow comparison with the average annual increases for each decade appearing in the previous historical table.

Motor Vehicles on Register, Tasmania

At 31 December	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles		
				Total	Annual increase	Per 1 000 of population
	'000	'000	'000	'000	'000	no.
1974.....	144.8	35.9	7.1	187.8	9.0	467
1975.....	155.3	37.0	7.4	199.7	11.9	491
1976.....	160.2	40.1	6.3	206.6	6.9	505
1977.....	166.5	40.7	6.0	213.2	6.6	517
1978.....	174.8	41.5	4.7	221.0	7.8	532
1979.....	180.2	43.6	4.6	228.4	7.4	544

## Motor Vehicles on Register in Australia

While different concepts of what constitutes 'motor vehicles on register' at a particular point of time may be appropriate for different purposes, for the purpose of obtaining uniform statistics for all states and territories, it is necessary to adopt a common concept of what constitutes 'motor vehicles on register' at a particular date. For this series, the Bureau has adopted the concept of motor vehicles on register at a particular date as being: (i) vehicles whose fees were paid up at that date, in respect of that date; and (ii) vehicles whose fees were not paid up at that date but subsequently were paid retrospectively to that date (or to an earlier date); and excluding all vehicles whose fees were not subsequently paid up in respect of that particular date, even though at that date their registrations may not have been formally terminated.

The following table shows estimated details of motor vehicles on the register for each state and territory at 30 June 1979. The figures are based on the final results of the census of motor vehicles conducted in respect of 30 September 1976 and data supplied by the various registration authorities. Diplomatic and consular vehicles and all Federal Government-owned vehicles other than those belonging to the defence services are included.

Motor Vehicles on Register, 30 June 1979

State or territory	Cars and station wagons	Commercial vehicles	Motor cycles	All vehicles	
				Total	Per 1 000 of population
	'000	'000	'000	'000	no.
New South Wales .....	1 876.8	445.0	91.4	2 413.2	475
Victoria .....	1 591.4	328.3	54.3	1 974.0	512
Queensland .....	835.3	272.5	75.6	1 183.4	539
South Australia .....	542.0	117.7	29.7	689.4	533
Western Australia .....	518.7	174.1	26.9	719.7	579
Tasmania .....	178.8	42.9	4.8	226.6	542
Northern Territory .....	25.7	17.4	2.5	45.6	393
Australian Capital Territory .....	88.6	14.9	3.1	106.6	480
Total .....	5 657.2	1 412.7	288.2	7 358.3	510

## Registration of New Motor Vehicles

A new motor vehicle classification was introduced from 1 July 1976 for new motor vehicle registration statistics. This classification, which replaced that introduced in January 1972, has as its main features:

- (i) adoption of the principal of accepting vehicle-type data as recorded by the registration authority;
- (ii) allocation of commercial vehicles to the categories 'utilities', 'panel vans' or 'rigid trucks' solely on the basis of recorded body type; under the previous classification system these commercial vehicles were classified as 'light commercial type' (if having a carrying capacity of less than one tonne) or as 'rigid' (if having a carrying capacity of one tonne or more), the light commercial type then being further sub-divided into 'open' or 'closed'; and
- (iii) the inclusion in 'other truck types' of motorised caravans, ambulances and hearses (previously classified as 'light commercial, closed').

Registrations of New Motor Vehicles, Tasmania

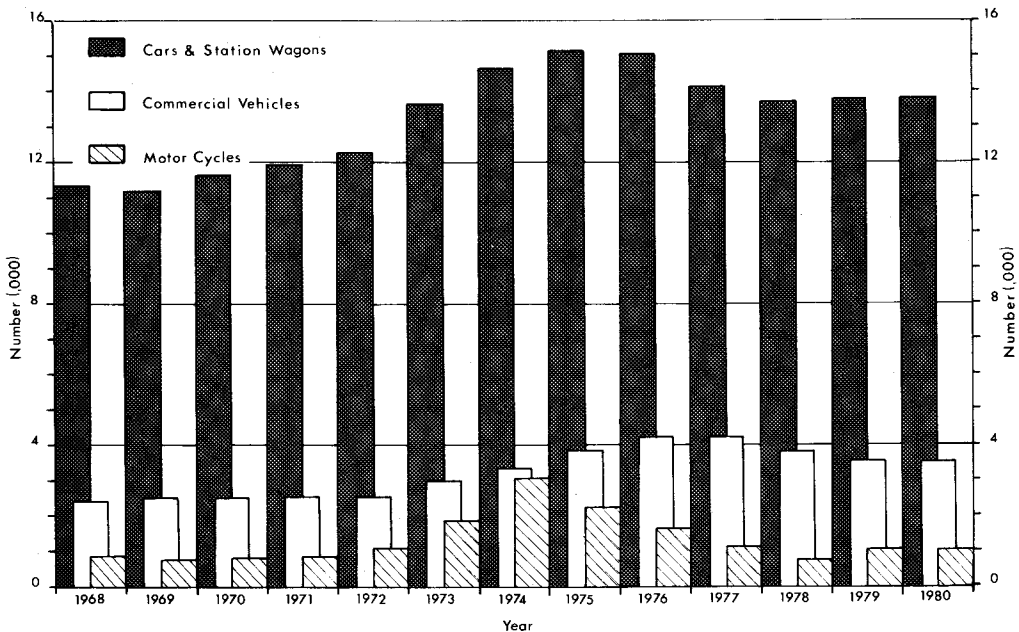
Type of vehicle	1974	1975	1976	1977	1978	1979
Motor cars .....	13 074	13 130	12 614	11 878	11 439	11 271
Station wagons .....	1 591	2 051	2 438	2 283	2 322	2 513
Commercial-type vehicles						
Utilities .....	1 148	1 228	(a) 1 403	1 365	1 269	1 163
Panel vans .....	899	1 249	(a) 1 243	1 319	1 018	840
Trucks—						
Rigid .....	974	1 004	(a) 1 146	1 109	1 088	894
Articulated .....	165	133	(a) 159	134	152	138
Other (b) .....	15	16	(a) 132	219	178	96
Buses .....	138	215	169	94	131	101
Motor cycles .....	3 051	2 254	1 636	1 118	789	1 039
Total .....	21 055	21 280	20 940	19 519	18 386	18 055

(a) Revised classification introduced from 1 July 1976 — see explanation preceding this table.

(b) Comprises non-freight carrying vehicles (e.g. tow trucks, fire engines and from 1 July 1976, campervans, ambulances and hearses).

In the last table, which shows details of new motor vehicle registrations for recent years, commercial vehicles registered and classified previously as 'light open', 'light closed' or 'heavy' have been reclassified as 'utilities', 'panel vans' or 'trucks'.

Registration of New Motor Vehicles, Tasmania



### Scrapping of Motor Vehicles

Apart from the few 'veteran' cars owned by enthusiasts, most vehicles are eventually scrapped. No information is collected on the number scrapped each year but the following table contains information from which some inferences may be drawn:

New Motor Vehicles Registered and Annual Increase in Motor Vehicles on Register, Tasmania ('000)

Particulars	1974	1975	1976	1977	1978	1979
New motor vehicles registered (a) . . . . .	21.1	21.3	20.9	19.5	18.4	18.1
Annual increase, motor vehicles on register (b) . . . . .	9.0	11.9	6.9	6.6	7.8	7.4

(a) During year ended 31 December.

(b) Annual increase measured at 31 December.

In comparing the two sets of figures in the previous table, it would be wrong to assume that the difference in each year represented scrapped vehicles only; exceptions would include vehicles transferred interstate and vehicles 'on blocks'—the fact that an owner has let a registration expire does not necessarily mean that he intends to scrap his vehicle. Subject to these and similar difficulties of interpretation, it would appear that about 21 000 motor vehicles have been scrapped during the last two years.

*Registrations of New Motor Vehicles According to Make*

The table that follows gives details of Tasmanian registrations of new motor cars and station wagons according to make. It illustrates the present popularity of Holden, Ford, Datsun, Toyota, Mazda and Chrysler makes which accounted for 92 per cent of all new motor vehicles of this type registered during 1979. In this table new motor vehicles registered since 1 July 1976 which may be recorded under more than one make name (e.g. Holden or Statesman, Chrysler or Dodge, Volkswagen or Audi) have been classified to the make recorded in the registration documents.

**Registrations of New Motor Cars and Station Wagons, Tasmania, 1979**  
**Classified by Predominant Make**

Make	Motor cars		Station wagons	
	Number	Proportion of total cars (per cent)	Number	Proportion of total station wagons (per cent)
Alfa Romeo .....	32	0.3	—	—
Audi .....	13	0.1	—	—
B.M.W. ....	40	0.4	—	—
Chrysler .....	812	7.2	412	16.4
Datsun .....	1 184	10.5	175	7.0
Fiat .....	64	0.6	15	0.6
Ford .....	2 473	21.9	484	19.3
Holden .....	3 896	34.6	684	27.2
Honda .....	266	2.4	4	0.2
Jaguar .....	6	0.1	—	—
Lancia .....	19	0.2	—	—
Leyland .....	93	0.8	15	0.6
Mazda .....	942	8.4	132	5.3
Mercedes-Benz .....	21	0.2	—	—
Peugeot .....	46	0.4	3	0.1
Renault .....	39	0.3	20	0.8
Rover .....	24	0.2	—	—
Subaru .....	21	0.2	146	5.8
Toyota .....	1 060	9.4	375	14.9
Triumph .....	4	—	—	—
Volkswagen .....	62	0.6	1	—
Volvo .....	108	1.0	30	1.2
Other .....	46	0.4	17	0.7
<b>Total .....</b>	<b>11 271</b>	<b>100.0</b>	<b>2 513</b>	<b>100.0</b>

**ROAD TRAFFIC ACCIDENTS IN TASMANIA****Scope of Statistics**

With the rapid development of road transport, there has been an increase in the number of road traffic accidents; some merely involve damage to vehicles, but others result in injury or death. To evolve meaningful statistics describing these events, it has been found necessary to narrow the field of observation to those road traffic accidents which involve casualties, since most accidents resulting only in vehicle damage are not required by Tasmanian law to be reported to the police (the drivers might merely exchange names and report to their respective insurance companies). Further, there is the difficulty of fixing, in monetary terms, some valid standard for determining what degree of vehicle damage warrants inclusion of an accident in a long-term statistical series—obviously \$50 or \$200 for repairs in 1950 is not comparable with \$50 or \$200 for repairs now.

For these and other reasons, the statistics in this section are restricted to details of those road traffic accidents involving casualties requiring medical or surgical treatment, or causing death, and which were recorded by the police.

### Responsibility for, and Causes of, Accidents

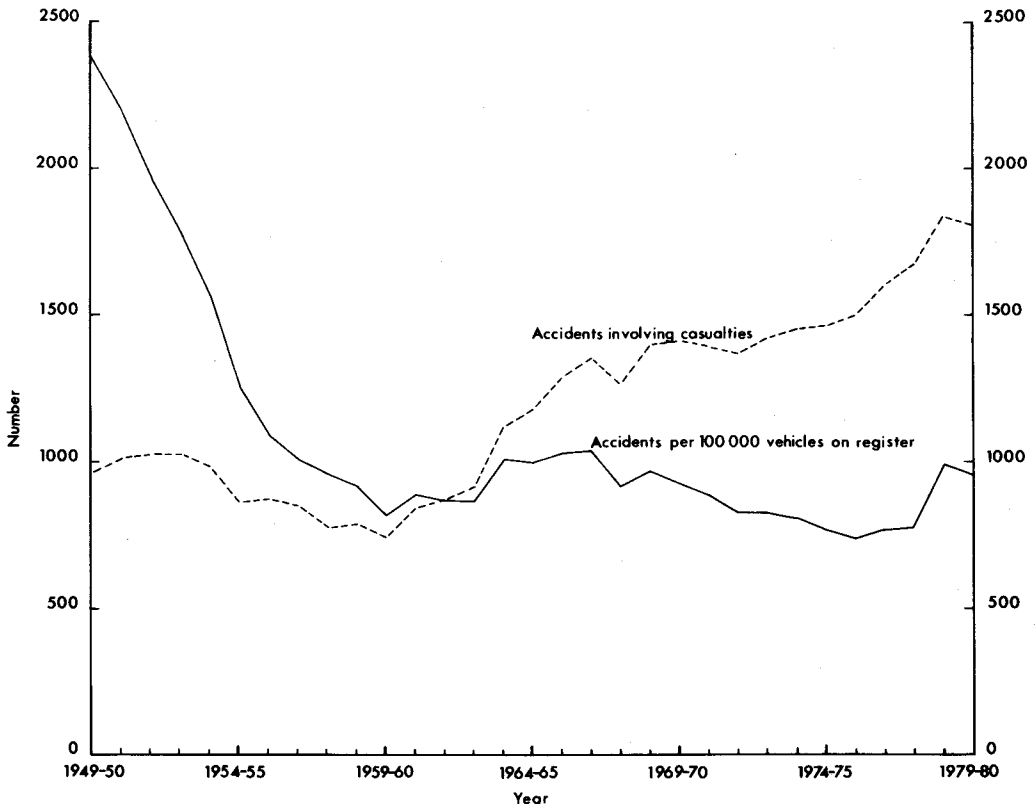
For the purpose of the statistics in this section, the police officer reporting the accident determines, on the basis of the evidence available, the road user or agency responsible, and also the prime cause of the accident. The fact that civil or criminal courts may later make different decisions on these matters is disregarded in these statistics; nor is any attempt made to distinguish between accidents giving rise to subsequent legal action and those not doing so.

#### Causes of Accidents

Causes of accidents in Tasmania are classified, for statistical purposes, in accordance with a standard list of 76 prime causes (although, in this section, only the most frequent causes are shown). Contributory causes and conflicting or incomplete evidence make precise classification difficult. No provision is made to record and classify such antecedent causes as fatigue, discourtesy, impatience or other driving faults. However, since July 1971 accidents where consumption of alcohol is involved have been given a special classification. Where the blood alcohol level of the road user considered responsible is 0.05 (grams of alcohol per 100 millilitres of blood) or greater, this is recorded separately and no cause for the accident is assigned. The same practice is followed for road users who were reported 'obviously affected by alcohol' by the police and: (i) refused breath and/or blood tests; or (ii) had a blood alcohol level under 0.05; or (iii) were not tested because facilities were not readily available. The double assumption in each such case is: (i) the road user's skills were impaired by alcohol; and (ii) this impairment was a factor contributing to the accident.

### Road Traffic Accident Statistics

#### Road Traffic Accidents, Tasmania



**Summary**

There has been a significant decline in the number of road traffic accidents (and particularly casualties) recorded during the last two years. The 77 road users killed during 1979-80 is the lowest annual road fatality total recorded since 1962-63. The following table summarises the principal statistics of road traffic accidents involving casualties for recent years:

**Road Traffic Accidents Involving Casualties, Tasmania**

Period	Accidents		Persons			
	Number	Per 10 000 vehicles registered (a)	Killed		Injured	
			Number	Per 10 000 vehicles registered (a)	Number	Per 10 000 vehicles registered (a)
1974-75 .....	1 466	77	120	6.3	2 061	108
1975-76 .....	1 502	74	107	5.3	2 160	107
1976-77 .....	1 606	77	103	4.9	2 314	110
1977-78 .....	1 674	78	118	5.5	2 402	112
1978-79 .....	1 537	69	98	4.4	2 113	95
1979-80 .....	1 510	66	77	3.4	2 140	93

(a) Based on average number of motor vehicles on register during period. 'Vehicles on register' is defined in the earlier section headed 'Motor Vehicle Registrations'.

**Causes of Accidents—Drivers of Motor Vehicles Responsible**

The next table analyses accidents for which drivers of motor vehicles were believed responsible:

**Road Traffic Accidents Caused by Drivers of Motor Vehicles, Tasmania, 1979-80  
Classification by Cause**

Principal causes of accidents for which drivers of motor vehicles (excluding motor cycles) were responsible	Accidents involving casualties	Persons killed	Persons injured
Accidents involving alcohol—			
Driver's blood alcohol level 0.05 (a) or greater .....	299	21	447
Driver refused test .....	9	—	19
Other cases (b) .....	30	3	48
Other accidents—			
Excessive speed having regard to conditions .....	84	7	131
Not keeping to the left .....	48	3	99
Not giving right of way .....	114	2	186
Failing to make right-hand turn with due care .....	67	3	101
Inexperience .....	36	1	59
Inattentive driving .....	191	2	287
Reversing without care .....	6	1	6
Overtaking without sufficient clearance .....	20	—	30
Infirmity of driver .....	9	—	11
Driver asleep or drowsy .....	24	1	25
Pulling out from kerb without warning .....	15	—	16
Failing to observe traffic sign or signal .....	86	—	117
Hit-run (n.e.i.) .....	10	1	9
Other causes (including not stated or not known) .....	18	2	26
<b>Total .....</b>	<b>1 066</b>	<b>47</b>	<b>1 617</b>

(a) Grams of alcohol per 100 millilitres of blood.

(b) Driver reported 'obviously affected by alcohol' by police but blood alcohol level less than 0.05, or not tested because facilities not readily available.

## Road Traffic Accidents, Drivers of Motor Vehicles Responsible (a): Summary, Tasmania

Accidents involving casualties	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Drivers of motor vehicles responsible—						
Number of accidents .....	1 010	1 019	1 106	1 214	1 089	1 066
Proportion of total accidents .... %	68.9	67.8	68.9	72.5	70.9	70.6

(a) Excludes riders of motor cycles.

## Location of Accidents

The next table shows the location of accidents in the State:

## Road Traffic Accidents and Casualties by Local Government Area, 1979-80

Local government area	Accidents involving casualties	Persons killed	Persons injured
Hobart .....	275	7	359
Launceston .....	137	6	177
Glenorchy .....	113	3	152
Clarence .....	92	3	131
Burnie .....	58	—	76
Devonport .....	103	6	151
Other .....	732	52	1 094
Tasmania .....	1 510	77	2 140

## Responsibility for Road Accidents

The next table shows the type of road user or agency believed responsible:

## Responsibility for Road Traffic Accidents, Tasmania, 1979-80

Responsibility attributed to—	Accidents involving casualties	Persons killed	Persons injured
Drivers of motor vehicles .....	1 066	47	1 617
Riders of motor cycles .....	100	4	119
Pedal cyclists .....	24	—	25
Pedestrians .....	148	19	133
Passengers .....	8	—	8
Motor vehicle defects .....	24	1	36
Motor cycle defects .....	5	—	5
Animals .....	4	—	5
Road conditions .....	86	3	131
Weather .....	9	—	14
Parties not involved (a) .....	28	—	37
Not stated or not known .....	8	3	10
Total .....	1 510	77	2 140

(a) e.g. a car collides with another, after swerving to avoid a pedestrian who is not struck.

## Alcohol-factor Accidents, Drivers of Motor Vehicles Responsible

The following table shows the blood alcohol level and age group of drivers of motor vehicles (excluding motor cycles) believed responsible for casualty accidents:



**Road Traffic Accidents Involving Alcohol, Drivers of Motor Vehicles Responsible, Tasmania, 1979-80**  
**According to Blood Alcohol Level and Age Group**

Blood alcohol level (a)	Age group of drivers responsible (in years)								Total
	Under 21	21-24	25-29	30-39	40-49	50-59	60 and over	Not stated	
Less than 0.05 .....	9	1	1	1	3	—	—	—	15
0.05 .....	3	3	—	3	—	—	2	—	11
0.06 .....	7	6	1	1	—	—	2	—	17
0.07 .....	10	3	2	2	3	1	—	—	21
0.08 .....	12	3	1	6	1	—	1	—	24
0.09 .....	10	3	3	1	—	1	1	—	19
0.10 .....	10	2	3	3	—	1	—	—	19
0.11 or 0.12 .....	14	7	8	4	1	1	1	—	36
0.13 or 0.14 .....	21	8	5	4	—	1	1	—	40
0.15 or 0.16 .....	11	12	10	8	1	—	—	—	42
0.17 or 0.18 .....	9	8	5	4	1	2	—	—	29
0.19 or 0.20 .....	4	6	1	6	1	—	1	—	19
0.21 or 0.22 .....	—	1	2	4	1	—	1	—	9
0.23 or 0.24 .....	1	—	1	3	—	1	—	—	6
0.25 or above .....	1	1	—	3	2	—	—	—	7
Refused test .....	1	4	1	3	—	—	—	—	9
Test facilities not available .....	4	3	1	4	1	2	—	—	15
Total .....	127	71	45	60	15	10	10	—	338

(a) Grams of alcohol per 100 millilitres of blood.

Of the 338 'driver responsible' casualty accidents in which alcohol was considered to be the possible prime or antecedent cause, 198 accidents (i.e. 58.6 per cent) involved drivers under 25 years of age.

**Causes of Accidents—Pedestrians Responsible**

The table below analyses road traffic accidents for which pedestrians were held responsible:

**Road Traffic Accidents, Pedestrians Responsible, Tasmania, 1979-80**  
**Classification by Cause**

Principal causes of accidents for which pedestrians were responsible	Accidents involving casualties	Persons killed	Persons injured
Accidents involving alcohol—			
Pedestrian's blood alcohol level 0.05 (a) or greater .....	5	2	3
Other cases (b) .....	3	—	3
Other accidents—			
Walking across roadway without due care .....	101	14	90
Passing behind or in front of moving or stationary vehicle or object .....	12	1	12
Children (under seven years of age) not under, or breaking away from, the supervision of an older person .....	20	2	18
Other causes (including not stated or not known) .....	7	—	7
Total .....	148	19	133

(a) Grams of alcohol per 100 millilitres of blood.

(b) Pedestrian reported 'obviously affected by alcohol' by police but blood alcohol level less than 0.05, or not tested because facilities not readily available.

**Drivers Involved in Accidents, Age Group and Licence Type**

During 1979-80 a total of 2 111 drivers of motor vehicles (excluding motor cycles) were involved in casualty accidents which were reported to the police. Of these, 27 per cent (576) were under 21 years of age and a further 29 per cent (613) were from 21 to 29 years of age.

The age group and type of driving licence held by these drivers at the time of the accident are shown in the next table:

**Road Traffic Accidents, Drivers of Motor Vehicles Involved, Tasmania, 1979-80**  
**According to Licence Type and Age Group**

Type of driving licence	Age group of drivers involved (in years)								Total drivers involved
	Under 21	21-24	25-29	30-39	40-49	50-59	60 and over	Not stated	
Learner .....	13	—	1	1	1	—	—	—	16
Provisional .....	143	6	6	3	—	1	—	—	159
Ordinary .....	396	304	258	337	201	165	157	1	1 819
Interstate or international .....	1	21	6	16	5	4	5	—	58
No licence .....	20	5	3	5	2	—	1	—	36
Not known .....	3	3	—	3	1	—	1	12	23
<b>Total .....</b>	<b>576</b>	<b>339</b>	<b>274</b>	<b>365</b>	<b>210</b>	<b>170</b>	<b>164</b>	<b>13</b>	<b>2 111</b>

### Road Features and Accidents

The following table analyses all accidents involving casualties according to road features at the site and shows that, in 1979-80, 38 per cent of accidents occurred on a straight section of road:

**Features of Roadways on Which Accidents Occurred, Tasmania, 1979-80**

Feature of roadway	Accidents involving casualties		Persons killed	Persons injured
	Number	Per cent of total		
At intersections—				
Controlled .....	87	5.8	—	107
Uncontrolled .....	397	26.3	9	581
Other than at intersections—				
Straight road .....	571	37.8	27	774
Bend or curve .....	446	29.5	40	668
Bridge, culvert or causeway .....	7	0.5	—	9
Other locations .....	2	0.1	1	1
<b>Total .....</b>	<b>1 510</b>	<b>100.0</b>	<b>77</b>	<b>2 140</b>

### Road Users Killed or Injured

The next table analyses the type of road user killed or injured:

**Type of Road User Killed or Injured, Tasmania, 1979-80**

Type of road user involved	Killed			Injured		
	Males	Females	Persons	Males	Females	Persons
Drivers of motor vehicles .....	29	4	33	649	300	949
Motor cyclists .....	5	—	5	160	10	170
Pedal cyclists .....	1	—	1	31	3	34
Passengers—						
Motor vehicle .....	11	6	17	366	410	776
Motor cycle .....	1	—	1	21	13	34
Other .....	—	—	—	—	—	—
Pedestrians .....	14	6	20	102	75	177
<b>Total .....</b>	<b>61</b>	<b>16</b>	<b>77</b>	<b>1 329</b>	<b>811</b>	<b>2 140</b>

*Types of Accidents*

Most accidents arise from collisions between vehicles, followed by accidents in which vehicles overturn or leave the road, as shown in the following analysis:

**Types of Accidents, Tasmania, 1979-80**

Types of accidents	Accidents involving casualties	Persons killed	Persons injured
Collisions between vehicles—			
Angle .....	399	9	593
Head on .....	121	5	252
Rear end .....	131	2	181
Side swipe—Same direction .....	45	—	62
Opposite direction .....	54	5	88
Vehicle—			
Overturning or leaving road .....	508	35	706
Colliding with—Fixed object (incl. parked vehicle) .....	52	1	64
Pedestrian .....	186	20	178
Animal .....	5	—	6
Other types of accidents .....	9	—	10
Total .....	1 510	77	2 140

*Age and Responsibility*

Drivers of motor vehicles (excluding motor cycles) were believed responsible for 1 066 out of the 1 510 accidents involving casualties which were reported to the police during 1979-80.

Drivers under 25 accounted for 540 or 50.7 per cent of these accidents (male drivers under 25, 424; female drivers under 25, 116).

Casualties associated with accidents attributed to drivers under 25 were: killed, 19; injured, 892.

The following table analyses the age and sex of the drivers responsible:

**Road Traffic Accidents, Tasmania, 1979-80**  
**Age and Sex of Drivers of Motor Vehicles Responsible**

Age group of drivers responsible (in years)	Male driver			Female driver		
	Accidents involving casualties	Persons killed (a)	Persons injured (a)	Accidents involving casualties	Persons killed (a)	Persons injured (a)
Under 17 .....	9	—	15	—	—	—
17-20 .....	282	13	471	68	—	115
21-24 .....	133	6	211	48	—	80
25-29 .....	96	6	127	24	1	38
30-39 .....	113	6	152	44	—	73
40-49 .....	61	3	82	23	—	29
50-59 .....	49	5	73	16	1	18
60 and over .....	74	4	99	17	1	26
Not stated (b) .....	9	1	8	—	—	—
Total .....	826	44	1 238	240	3	379

(a) The age groups relate to the driver who may or may not be included in the casualty figures.

(b) Includes accidents for which hit-run drivers were responsible.

*Age and Sex of Road Users Killed*

The next table shows the age and sex of the various types of road user killed:

**Road Traffic Accidents, Tasmania, 1979-80**  
**Age and Sex of Road Users Killed**

Age group (in years)	Type of road user killed					All road users
	Drivers of motor vehicles	Motor cyclists	Pedal cyclists	Passengers (all types)	Pedestrians	
MALES						
Under 7 .....	—	—	—	—	1	1
7-16 .....	—	—	1	2	5	8
17-20 .....	7	1	—	4	2	14
21-29 .....	7	4	—	4	1	16
30-39 .....	8	—	—	1	—	9
40-49 .....	2	—	—	—	—	2
50-59 .....	4	—	—	—	3	7
60 and over .....	1	—	—	1	2	4
Total .....	29	5	1	12	14	61
FEMALES						
Under 7 .....	—	—	—	1	1	2
7-16 .....	—	—	—	—	—	—
17-20 .....	—	—	—	1	—	1
21-29 .....	2	—	—	—	1	3
30-39 .....	—	—	—	—	—	—
40-49 .....	1	—	—	2	1	4
50-59 .....	1	—	—	—	—	1
60 and over .....	—	—	—	2	3	5
Total .....	4	—	—	6	6	16

*Days of the Week on Which Accidents Occurred*

The following table shows accidents and casualties according to the day of the week on which they occurred:

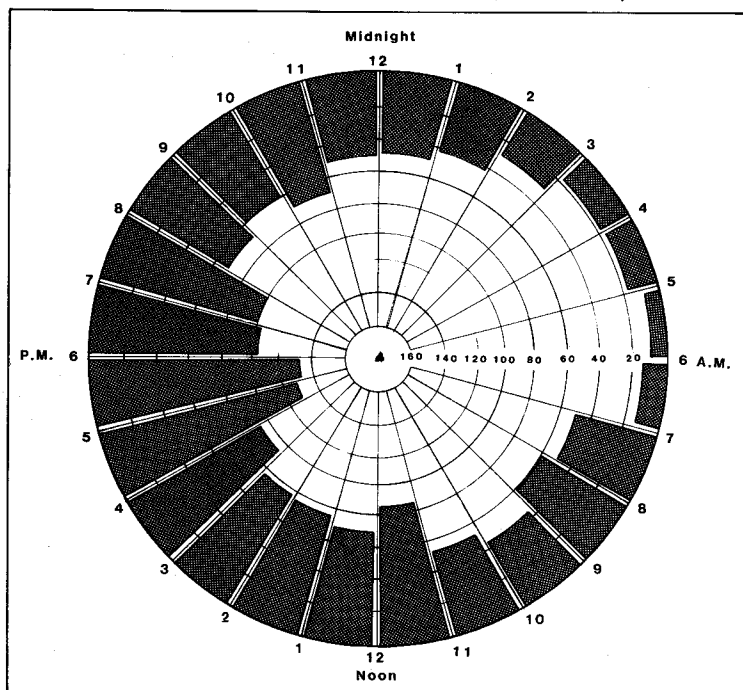
**Road Traffic Accidents, Tasmania, 1979-80**  
**Days of the Week on Which Accidents Occurred**

Day of the week	Accidents involving casualties	Persons killed	Persons injured
Monday .....	178	7	252
Tuesday .....	162	9	210
Wednesday .....	179	8	238
Thursday .....	215	9	302
Friday .....	236	14	319
Saturday .....	285	17	419
Sunday .....	255	13	400
Total .....	1 510	77	2 140

*Time of Day When Accidents Occurred*

The following diagram shows the time of day when accidents involving casualties occurred during 1979-80:

**Time of Day when Accidents Occurred, Tasmania, 1979-80**

**Source of Data**

Details of each road traffic accident reported to the police, or investigated by the police are recorded on a standard form and copies are made available to the Transport Commission and to the Australian Bureau of Statistics; at the Bureau, quarterly statistics are compiled only from those reports describing accidents involving casualties. The Transport Commission employs the reports it receives in connection with road engineering, the location of traffic signs and signals, the pin-pointing of dangerous locations, traffic engineering, and accident prevention in general.

**No-Fault Third Party Insurance**

'No-fault' third party insurance was introduced in Tasmania on 1 December 1974 under the *Motor Accidents (Liabilities and Compensation) Act 1973*. Prior to the introduction of the 'no-fault' scheme, motorists were compelled to insure with insurance companies against claims by other persons resulting from motor vehicle accidents. The success of a claim was dependent upon the claimant proving negligence (or fault) on the part of the driver of a motor vehicle. 'No-fault' insurance, however, entitles a person to compensation for injuries sustained in a motor vehicle accident without regard to who was at fault. The extent of the compensation is determined by the scheduled benefits outlined in the Act. The operation of the scheme does not, however, preclude the individual from suing for damages should it be felt that the scheduled benefits are insufficient compensation and that the accident was the result of negligence. Insurance is compulsory under the Act.

**Premiums**

Premiums vary according to the type of vehicle and the purpose for which it is used. On 1 December 1979, the annual premium for most private passenger-type motor vehicles was reduced to \$37.00 from \$39.00, while premiums for motor cycles were increased substantially. Premiums are subject to review annually by the Premiums Board of Tasmania which was established under the Act to recommend rates of premiums to the Minister responsible.

### *Scheduled Benefits*

The more important of the scheduled benefits prescribed in the Act are:

- (i) Medical, hospital and ambulance expenses.
- (ii) Disability allowances for employed persons, self-employed persons or housekeeping.
- (iii) Dependant's allowance.
- (iv) Death benefits.
- (v) Funeral benefits.

### *Motor Accidents Insurance Board*

The Motor Accidents Insurance Board, set up to administer the Act, consists of five members who are appointed by the Governor. The chairman, a legal practitioner, is appointed directly and each of the following organisations appoints one member: (i) the Tasmanian Government Insurance Board; (ii) participating insurers other than the Tasmanian Government Insurance Board; (iii) the Transport Commission; and (iv) the Royal Automobile Club of Tasmania (representing the interests of motor vehicle users).

## **AIR TRANSPORT IN TASMANIA**

### **Introduction**

During 1980, Ansett Airlines of Australia and Trans-Australia Airlines continued to provide the greater percentage of passenger traffic to and from the Tasmanian mainland with up to 224 jet aircraft and 116 prop-jet aircraft flights per week. Executive Airlines Pty Ltd operate a commuter service between Essendon and Flinders Island. East West Airlines has been granted an airline licence enabling them to operate regular weekend services between Sydney and Hobart. Bizjets Pty Ltd ceased operations between Essendon and Devonport in 1980.

Supplementary intrastate services began during 1964 and in 1980 there were two intrastate services: Air Tasmania Pty Ltd who introduced a new 18 seater Embraer Bandeirante and Executive Airlines Pty Ltd who are currently evaluating new aircraft types.

Air freight is carried regularly between Melbourne and the major Tasmanian airports and islands, not only in the belly lockers of the regular domestic airlines, but also in a variety of aircraft including Lockheed Electras of Ansett Airlines of Australia, the quick-change Fokker F27 aircraft of Trans-Australia Airlines and the Argosies of IPEC. Smaller aircraft also carry a large amount of freight across Bass Strait and to the Tasmanian islands.

### **Administration**

#### *Administration of the Air Navigation Act and Regulations in Tasmania*

The Federal *Air Navigation Act* 1920 and associated regulations are administered for Tasmania by the Director, Department of Transport, Victoria-Tasmania Region. Regulation of aircraft and commercial operations within Tasmania is administered through the Transport Commission under authority of the *Traffic Act* 1925. The Federal Department's more important functions include the provision and maintenance of government aerodromes and associated facilities, the licensing of aircraft operators and pilots and a responsibility for supervising all aspects of air safety.

#### *Classification of Flying Activities*

Flying activities are classified by regulation into the following well-defined categories:

- (i) *Private Operations*: Being operations in which an aircraft is used for personal transportation—private or business, aerial work for which no form of remuneration is received, carriage of persons or goods for other than hire or reward, or the carriage of goods other than for the purposes of trade.
- (ii) *Aerial Work Operations*: These operations refer to the aircraft being used for aerial survey; spotting; photography; agriculture; advertising; flying training; and the cartage of goods being the property of the pilot, owner or hirer of the aircraft for purposes of trade. Within Tasmania there are five licensed flying

training organisations and two aerial agricultural organisations carrying out most of the aerial work activities. Other types of aerial work are carried out by a further 12 operators.

- (iii) *Charter Operations*: These refer to aircraft hired for passenger or cargo movement, not between fixed terminals or to fixed schedules. There are 12 licensed charter operators based in Tasmania.
- (iv) *Commuter Operations*: These are regular public transport operations conducted in accordance with fixed schedules between fixed terminals. Operators are authorised to operate without holding airline licences by exemptions granted under Air Navigation Regulation 203. Tasmania has two approved operators.
- (v) *Regular Public Transport*: This refers to aircraft operating under an airline licence to carry passengers and cargo according to fixed schedules and on specified routes. All services of this kind are provided to Tasmania by Ansett Airlines, East-West Airlines and Trans-Australia Airlines.

### Tasmanian Aerodromes

The major aerodromes in Tasmania are owned and operated by the Federal Government through the Department of Transport. The following sections describe both Federal Government-owned and other aerodromes in Tasmania.

#### Federal Government-owned Aerodromes

*Hobart Airport*: Ranks seventh in the volume of passengers handled at Australian terminals. It was completed in 1956. Extension and strengthening of the runway, taxiway and aprons to take DC9 and Boeing 727 aircraft at full weight was completed in 1966. International operations to Christchurch, New Zealand, commenced during November 1980, with Ansett Airlines and Trans-Australia Airlines operating on behalf of Qantas. The airport is equipped with complex aviation aids. New terminal and communication buildings were completed in 1976. It lies 18 kilometres by road from the city. A helicopter charter service operates between the airport and the city.

*Launceston Airport*: 16 kilometres south-east of Launceston, it ranks after Hobart in passenger volume but handles considerably more freight. The area control centre provides air traffic control for Tasmania via repeater stations, south on Mount Wellington and north on Mount Barrow. The airport is also used for flying training, light aircraft charter and aerial work operations.

*Wynyard Airport*: This has one sealed runway of 1 341 metres and one 1 189 metres long for regular public transport operations, charter, aerial work and private operations. It has been upgraded to handle F27 aircraft.

*Devonport Airport*: This was originally constructed in the early 1930s. In 1950 it was developed to handle DC3, DC4 and Viscount-type aircraft. Regular passenger services (using F27 aircraft), aerial and charter work, flying training and private operations are carried on from this location.

*King Island Airport*: Is located six kilometres north-east of Currie. It has three gravel runways, night lighting and radio navigational equipment. It caters for Ansett Airlines F27s and the smaller aircraft of Air Tasmania Pty Ltd and Executives Airlines.

*Flinders Island Airport*: Is located five kilometres north of Whitemark. There are two gravel and one grass landing strips plus an apron, taxiway, terminal and navigation aid facilities.

*Cambridge Airport*: This was constructed during the early period of aviation and has four runways. The proximity of hills prevent further development and after completion of the Hobart Airport, Cambridge became a centre for light aircraft activities.

#### Locally Owned Aerodromes

*Smithton Airport*: Located three kilometres west of Smithton, it is owned by the Transport Commission. It has a sealed main runway plus lesser gravel strips and is used for itinerant charter and private flights.



**St Helens Airport:** The aerodrome is owned and operated by the Municipality of Portland. A grassed strip 1 189 metres long and 91 metres wide is of sufficient dimension to permit operations by DC3 and F27-type aircraft. The aerodrome currently serves the charter, aerial work and private operation requirements for the area and has a non-directional beacon for instrument navigation.

**Queenstown Airport:** The Municipality of Queenstown provided an authorised landing area for light aircraft in 1937. In 1963 work was commenced on the construction of a runway suitable for the operation of DC3-type aircraft at Queenstown under the local ownership plan; this was opened on 17 April 1966.

**Strahan Airport:** This airport, together with Queenstown Airport, services the West Coast of Tasmania. Opened for regular public transport operations in 1964, Strahan aerodrome was constructed under the aerodrome local ownership plan and is owned by the Municipality of Strahan.

### Aircraft, Passenger and Freight Movements

The following table shows the number of scheduled aircraft movements at the principal airports in Tasmania during recent years. For the purposes of the statistics in this table a take-off is regarded as one movement and a landing as another.

Aircraft Movements: Principal Airports

Year	Hobart	Launceston	Devonport	Wynyard	King Island	Flinders Island
1974.....	7 599	10 982	5 409	5 148	1 079	(a) 349
1975.....	7 365	9 856	4 775	4 334	732	—
1976.....	7 543	9 532	4 224	3 899	693	—
1977.....	8 073	10 265	3 944	4 006	707	—
1978.....	8 832	11 313	4 190	4 645	737	—
1979.....	8 555	11 550	3 856	4 367	713	—

(a) Regular public transport operated by Ansett Airlines of Australia ceased from October 1974.

The next table shows the volume of passengers and freight handled at each airport; the following definitions apply:

**Passengers:** The figures are for fare-paying passengers only at each airport and are the sum of embarkations and disembarkations.

**Freight:** The figures are the sum of all revenue freight (including excess baggage) loaded and unloaded at each airport.

Passenger and Freight Movements: Principal Airports (a)

Year	Hobart	Launceston	Devonport	Wynyard	King Island	Flinders Island
PASSENGERS ('000)						
1974.....	392	294	107	91	22	(b) 7
1975.....	371	287	100	90	15	—
1976.....	399	299	88	85	13	—
1977.....	411	326	83	83	13	—
1978.....	448	367	81	86	15	—
1979.....	464	386	82	87	14	—
FREIGHT (Tonnes)						
1974.....	7 130	12 131	404	343	220	(b) 60
1975.....	7 040	11 646	337	335	122	—
1976.....	8 111	13 324	363	316	114	—
1977.....	8 575	14 964	355	331	118	—
1978.....	9 588	16 794	399	380	117	—
1979.....	9 685	20 785	373	376	229	—

(a) See definitions preceding this table.

(b) Regular public transport operated by Ansett Airlines of Australia ceased from October 1974.

The increase in the total number of passengers carried by the principal airports (as shown in the above table) in 1979 over 1978 was 6.1 per cent. The total freight carried showed an increase of 7.95 per cent over the same period.

#### *Comparison of Principal Australian Airports*

The next table shows the volume of activity at the principal Australian airports in terms of the number of passengers, freight and aircraft movements. Details of international services have been excluded so that comparisons are purely in terms of domestic traffic (international services are centred on Melbourne, Sydney, Brisbane and Perth).

**Passengers, Freight and Aircraft Movements  
Principal Airports, Australia, 1978**

Airport	Passengers	Freight (tonnes)	Aircraft movements
Sydney .....	5 784 163	58 028	87 921
Melbourne .....	4 908 893	72 680	70 065
Brisbane .....	2 396 713	27 052	34 913
Adelaide .....	1 868 795	22 264	25 716
Canberra .....	959 309	3 956	16 920
Perth .....	879 113	13 331	13 013
Hobart .....	463 575	9 685	8 555
Launceston .....	385 969	20 785	11 500

### **FREIGHT EQUALISATION**

In April 1974, Mr. J. F. Nimmo was appointed by the Federal Government as a Commissioner of a 'Commission of Inquiry into Transport to and from Tasmania'. The Commission was appointed because of the widely held view that Tasmania suffered a considerable disability with regard to freight and passenger rates to and from mainland Australia compared to other states.

The Commission's Report (the 'Nimmo Report') was presented to the Government in March 1976. A summary of the Report is included in the 1977 *Year Book*. Following release of the report, the Federal Minister for Transport, on 9 June 1976, announced details of a scheme to be administered by the Tasmanian Branch of his Department for equalising the trans Bass Strait freight costs of Tasmanian manufacturers and producers who exported goods to the Mainland.

The new scheme, known as the Tasmanian Freight Equalisation Scheme (TFES), was largely based on the recommendations of the Nimmo Inquiry. In addition to providing financial compensation to Tasmanian manufacturers and producers, the aim of the scheme is to stimulate the use and development of Tasmanian resources by removing an obstacle to investment and to promote the development of a more efficient transport system.

Under the scheme, Tasmanian consignors of goods are paid a subsidy which is intended to compensate them for the excess transport charges they incur. A separate rate of subsidy is calculated for each common item of freight for each major route between Tasmania and interstate ports. The amount of assistance is calculated as the difference in cost for door-to-door transport of the item between Tasmania and the Mainland and that for transporting it over a similar distance on the Mainland.

The method used in calculating assistance rates means that changes in the rate depend on the relative movements of Tasmanian and Mainland transport costs. If Mainland costs increase by the same amount as Tasmanian rates, TFES assistance would not change. If mainland rates were to increase more than Tasmanian rates, TFES assistance would not change. If mainland rates were to increase more than Tasmanian rates, then TFES assistance would decrease.

Payment of the subsidy is made to the actual consignor of the goods, leaving him free to choose the shipping line which provides the service best suited to his needs. Prior to the introduction of freight equalisation, Government assistance for transport to and from Tasmania took the form of subsidies paid to the government shipping line, Australian National Line. This was found to seriously disadvantage private shipping lines and to

encourage the use of an inefficient transport route. In Newfoundland, such subsidies were also found to discourage the development of local industries (see the 1980 *Year Book*, p. 556).

The TFES does not cover all consignments from Tasmania and three major categories of freight do not receive assistance payments:

- (i) Bulk cargoes were excluded from the scheme on the recommendation of the Nimmo Report because they were found not to be disadvantaged relative to similar movements on the Mainland.
- (ii) Air cargo is not included because the Government considered that assistance would create inequities for manufacturers in comparable circumstances on the Mainland. (The Nimmo Report recommended that assistance be paid on certain classes of air freight as air transport was more expensive than sea transport and Tasmanian manufacturers did not have the fast door-to-door overnight movements by road that are available to mainland manufacturers.) In its 1978 report, the Bureau of Transport Economics (BTE) recommended that further consideration be given to providing TFES assistance to certain air cargoes.
- (iii) Overseas cargoes were not included because many overseas shipping lines paid the centralisation cost of moving containers between Tasmania and the Mainland. As such arrangements do not apply to some areas of the Mainland the Government felt that TFES assistance to exports would be discriminating in Tasmania's favour. However, in its 1978 Report, the BTE recommended that further consideration be given to this matter.

The following measures were associated with the introduction of freight equalisation assistance:

- (i) Sea freight rates were restored to economic levels. This involved increases to north-bound freight rates which had been frozen since 1974, a lesser increase in south-bound rates and an increase of about 15 per cent in the Devonport-Melbourne passenger fares. TFES rates of assistance were calculated on the basis of economic freight rates being charged.
- (ii) The Australian National Line passenger service between Sydney and Tasmania was discontinued.
- (iii) The railway rates were increased to bring these nearer to economic levels.
- (iv) The annual subsidy on the *Empress of Australia* passenger service was increased from \$1 million to \$2 million.

Assistance in respect of south-bound goods and equipment for Tasmanian manufacturers and producers was announced in November 1977 and made retrospective to 1 July 1976. The goods eligible for south-bound assistance must be of Australian origin and suffer an actual freight disability. Eligible producers are: (i) primary producers in respect of equipment and packing materials; and (ii) manufacturers and mining undertakings in respect of equipment used in the production process and raw materials input, provided that these total more than 5 per cent of the factory door cost of the finished product.

At the direction of the Federal Minister for Transport, the Bureau of Transport Economics re-assessed the freight disability for north-bound goods in late 1977. In recalculating the rates of assistance, the Bureau generally followed the methodology used by the Nimmo Inquiry but changed one significant aspect. While Nimmo determined rates of assistance by a comparison of the average transport costs for Tasmanian consignors for each commodity with that of their mainland counterparts, the BTE based the level of assistance on a comparison between the costs of the most efficient consignors in order to encourage efficiency. The Minister released the Bureau's report and announced new rates of assistance on 15 July 1978 which were retrospective to 1 July 1978.

In addition to recalculating rates of assistance, the Bureau introduced some small changes in the format of the Schedule of Rates in order to facilitate the preparation and payment of claims. Some commodity groups were split into two classifications to enable more exact compensation to be made and items with similar transport characteristics were grouped together to facilitate the introduction of new commodities into TFES in the future. The unit of measurement on which assistance payments are based was changed from cubic metres (shipping space) to tonnes weight for a large proportion of commodity classifications.

The BTE also made a number of recommendations for further study into various aspects of the current scheme, Tasmanian transport services and on the effect of TFES on Tasmanian industry. In its investigations, the BTE found evidence to suggest that TFES assistance was beginning to stimulate the development and expansion of new and existing industries. However, it pointed out that while the Scheme may assist industries in which Tasmania has a comparative advantage, it was also possible that it may hinder structural change by affording protection to declining industries, in which case some changes to TFES might be required.

The Bureau reviewed south-bound rates of assistance and north-bound rates for timber and livestock during 1979. The rates for sheep and cattle, and for timber, were split into sub-classifications to allow more accurate calculation of freight equalisation rates. The Minister released the Bureau's report and announced new rates on 27 February 1980. The new rates were effective from 1 March 1980, with the exception of those for north-bound timber which were effective from 1 January 1980.

Late in 1980, the Bureau of Transport Economics began a review of the methodology and implementation of the Scheme.

Freight equalisation payments in 1979-80 totalled \$27 561 064, comprising 93 per cent paid to north-bound freight claimants and 7 per cent paid to south-bound claimants.

## **POSTAL AND TELECOMMUNICATIONS SERVICES**

### **Introduction**

Prior to 1 July 1975 the Postmaster-General's Department provided and controlled postal and telecommunications services in Tasmania, supported by engineering, finance and accounting, supply, personnel and administrative establishments. From 1 July 1975 control of these services has been vested in two commissions: the Australian Postal Commission (Australia Post) and the Australian Telecommunications Commission (Telecom). The activities of these bodies in Tasmania are outlined below.

### **Australia Post**

Apart from its obvious role of providing postal services, Australia Post also acts as an agent for a number of other instrumentalities in transactions which include: Commonwealth Savings Bank deposits and withdrawals; Telecom Australia account payments; telegrams; Defence Home repayments; sale of State duty stamps and sale of income taxation instalment stamps.

#### **Postal Money Orders**

From 21 November 1977 the postal order and money order services were replaced by a postal money order service. As well as providing a money transfer service by mail, postal money orders can also be sent by telegraph. Charges are 30 cents for amounts up to two dollars and 60 cents for amounts over two dollars up to \$500. Orders for overseas are limited to \$100 and a remitter may send only one such order in any week. The charges are \$1.80 for orders of up to \$30, and six cents for each dollar, or part of a dollar, for amounts over \$30.

#### **The Postal Service**

The first long-distance overland mail service in Australia was started between Hobart and Launceston in 1816, the carrier walking both ways and taking a fortnight for the round trip.

The number of individual postal articles handled in Tasmania in 1978-79 amounted to 65 million compared to 56.7 million in 1977-78. Australia Post handled 2 513 million articles throughout Australia in 1978-79 compared to 2 303.5 million in the previous year.

All mail to and from Tasmania and the Mainland is carried by air as far as Melbourne, priority being given to priority paid mail, standard articles and mail on which airmail fees have been paid. The balance is forwarded on an 'Air Opportunity' basis. A local priority paid mail service was introduced in November 1975 and provides guaranteed delivery within Hobart and suburbs on the next working day. This service is also available between Hobart, Launceston, Devonport, and Burnie. An overnight parcel service, introduced towards the end of 1976, provides for next working day delivery of all mail throughout the State, with only minor exceptions.

Australia Post also provides courier services for urgent items in Hobart with an intrastate network extending to Launceston, Devonport, Ulverstone, Latrobe, Deloraine, Penguin, Wynyard and Burnie and an interstate network which includes all state capitals, as well as Canberra.

At 30 June 1980 Australia Post had a full-time staff in Tasmania of 789; 85 persons were employed part-time, 240 were employed at non-official post offices (and paid on the basis of the volume of business transacted) and 158 had mail service contracts with Australia Post. There were 514 street posting boxes in the State and 184 street delivery rounds were in operation.

**Postal Services (a), Tasmania**

Particulars	Unit	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Post offices—							
Official .....	no.	46	46	46	42	42	42
Non-official .....	no.	251	234	222	220	215	207
Postal traffic (b)—							
Standard letters .....	'000	63 272	59 644	44 829	45 406	48 690	51 828
Non-standard articles .....	'000			5 528	5 627	7 569	12 252
Parcels .....	'000			220	310	342	379
Registered articles .....	'000	289	308	132	126	124	121
Registered articles .....	'000	203	193				
Total .....	'000	63 764	60 145	50 709	51 469	56 725	64 580

(a) Controlled by Postmaster-General's Department up to 1 July 1975.

(b) Number of separate articles handled.

**Australian Telecommunications Commission (Telecom Australia)**

*Development of Telecommunications*

Hobart and Launceston were linked by a telegraph line in 1857 and two years later a Bass Strait cable was in operation, only to fail in 1861. By 1869 a second cable was laid and communication with overseas countries became possible in 1872 when the Overland Telegraph was established between Adelaide and Darwin.

The first telephone line in Tasmania linked Hobart and Mt Nelson signal station in 1880, both Hobart and Launceston having exchanges by 1883. However, no link with Victoria or overseas countries was provided until 1936.

The State is now served with a network of high-capacity, high-quality trunk channels which are extended to other Australian states and linked with the Seacom and Compac cables connecting Australia to overseas countries. There are also links to the Overseas Telecommunications Commission earth satellite stations at Carnarvon, Ceduna and Moree. The State is divided into three districts (which coincide with the S.T.D. area code districts), each in the charge of a District Telecommunications Manager.

**Telegraph:** The teleprinter exchange (TELEX) had only one Tasmanian subscriber in 1957 but 950 were connected by 30 June 1980. The TELEX service is fully automatic and subscribers can now contact each other without an exchange operator's assistance. Calls can be made automatically to many overseas countries tied in with Australian telegraphic services, while the remainder can be contacted through an exchange operator. Extensive use is made of the long established picturegram service by the press; organisations such as the Bureau of Meteorology and private companies have a similar service available for the transmission of charts and documents.

**Telephones:** The Commission completed the conversion to automatic working of all the telephone exchanges in Tasmania on 15 June 1977. There were then 198 automatic exchanges in the State. Tasmania became the first Australian State to have a fully automatic telephone system.

*Telephone and Telegraph Services*

The following table analyses telephone and telegraph services in Tasmania:

Telecommunications Services, Tasmania (a)

Particulars	Unit	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Telephone—							
Services in operation (b)—							
Business .....	'000	37	35	36	36	36	35
Non-business .....	'000	57	64	69	75	81	88
Total .....	'000	95	99	104	111	117	124
Public telephones .....	'000	1	1	1	1	1	1
Instruments in operation (b) .....	'000	133	140	146	155	164	174
Automatic exchanges (b) .....	no.	191	195	198	197	196	196
Manual exchanges (b) .....	no.	21	11	—	—	—	—
Value of calls made—							
Metered (local and S.T.D.) .....	\$'000	12 666	17 150	19 313	24 748	28 207	34 083
Trunk .....	'000	2 297	2 062	2 099	2 175	2 519	3 046
Public telephone (local and trunk) .....	\$'000	721	974	1 146	1 271	1 466	1 670
Telegraph—							
Phonograms lodged .....	'000	221	194	173	143	104	81
All telegrams lodged (c) .....	'000	424	356	298	242	178	135

(a) Telecommunications services were controlled by the Postmaster-General's Department prior to 1 July 1975.

(b) At 30 June.

(c) Includes telegrams lodged by telephone (i.e. phonograms).

The installation in recent years, of the high-capacity trunk channels, known as the Broadband System, together with modern trunk switching exchanges, has enabled the Commission to provide Subscriber Trunk Dialling (S.T.D.) facilities for the direct dialling of trunk calls. This facility enables subscribers to make direct long-distance calls to anywhere in Australia by simply dialling the required number. All telephone subscribers in Tasmania have access to S.T.D. which avoids the delays associated with manually-operated exchanges. Charges are based on actual time used and there is no minimum time period as with manually booked trunk calls.

International Subscriber Dialling (I.S.D.) to more than 140 countries is now available upon request to 58 256 telephone subscribers throughout the State. At the end of June 1980, 3 783 subscribers had availed themselves of this facility.

There is an increasing demand for facilities to transmit digital data over telephone and telegraph lines. The data can be sent over three alternative links: (i) through the telephone network; (ii) by direct point to point private telephone or telegraph lines provided exclusively for the customer; and (iii) through the telex network.

Lines suitable for high speed transmission can be provided using alternatives (i) and (ii). Originally known as 'Data Transmission', this service has been renamed 'Datel'. Digital data information must be converted into a form suitable for transmission over the lines provided by the Commission. The conversion is performed by a modulator/demodulator unit known as a 'Modem'. At 30 June 1980, 860 Modems were in service in Tasmania.

The 'Telefinder Radio Paging Service', which commenced in Hobart on 14 November 1977 and in Launceston on 19 February 1979 provides a point to point contact facility whereby a Telefinder subscriber carries a lightweight pocket receiver which emits an audible 'Beep' when it receives a signal broadcast from a paging radio transmitter. The alerted customer then takes some pre-arranged course of action such as contacting his office to receive information. At 30 June 1980, 616 paging units were in operation in the State.

**RADIO COMMUNICATION****Stations in Tasmania**

The next table relates to radio communication stations only; particulars of broadcasting stations are specifically excluded and are dealt with in a subsequent section.

**Number of Authorised Radio Communication Stations, Tasmania at 30 June  
(Two-way Services)**

Particulars	1975	1976	1977	1978	1979	1980
Fixed stations—						
Outpost (a) .....	11	10	9	5	4	2
Other (b) .....	108	118	113	136	158	204
Total .....	119	128	122	141	162	206
Land stations—						
Aeronautical (c) .....	7	7	8	8	8	11
Base stations for—						
Land mobile services (c) .....	684	726	798	860	884	943
Harbour mobile services (c) .....	12	14	30	34	40	35
Coast (d) .....	38	37	38	44	45	50
Experimental .....	17	17	27	44	44	39
Total .....	758	801	901	990	1 021	1 078
Mobile stations—						
Aircraft .....	54	57	57	71	71	93
Land mobile services .....	5 223	5 674	6 039	6 539	6 878	7 411
Harbour mobile services .....	116	162	464	731	993	924
Outpost .....	48	45	46	45	55	60
Ships .....	789	805	802	859	854	865
C.B. radio service (licences) .....	—	—	—	5 050	(e) 3 526	2 975
Total .....	6 230	6 743	7 408	13 295	12 377	12 328
Amateur stations .....	240	243	256	321	376	406
Grand total .....	7 347	7 915	8 687	14 747	13 936	14 018

(a) Stations established in remote localities for communication with control stations, e.g. the lighthouse service.

(b) For exchange of radio messages with other similar stations.

(c) For exchange of radio messages with mobile stations.

(d) Land stations for communication with ocean-going vessels.

(e) Up to five sets may be included on the one licence from 30 June 1978.

To establish and operate radio communication equipment, it is necessary to obtain a licence from the Postal and Telecommunications Department. This Department is responsible for overall management of the radio frequency spectrum involving the following radio regulatory functions: (i) frequency allocation; (ii) frequency measuring and radio monitoring; (iii) determination of equipment standards; (iv) conduct of examinations for Radio Operators' Certificates of Proficiency; (v) inspectoral functions; (vi) licensing formalities; and (vii) investigation of radio and television interference. The radio frequency spectrum is a national resource although it is somewhat different from other resources such as minerals, water, fuels, fisheries, forestry, etc. The radio frequency spectrum is used and not consumed but it is wasted when not used correctly. It is for this reason that the Postal and Telecommunications Department makes every effort to ensure interference-free operation for all services.

Some examples of the use to which this form of communication is put include: (i) Mobile radiotelephone networks operated by government and semi-government bodies including the State Disaster Radiocommunication Frequency Plan. This frequency plan is unique in Australia in that emergency services, councils and other government bodies have been allocated V.H.F. frequencies within mobile 'switching distance' of each other. Thus the plan

facilitates intercommunication in emergencies between mobile units of the various emergency services. The plan was created by officers of the Postal and Telecommunications Department following radio communication difficulties experienced during the 1967 bushfires in southern Tasmania. (ii) Mobile radiotelephone networks operated by private enterprises such as transport and taxi companies, building contractors, etc. (iii) Coastal radio services to ship stations at sea provided by stations operated by the Overseas Telecommunications Commission. (iv) Coastal radio services for fishing boats provided by stations operated by private enterprises engaged in the fishing industry at various ports around the Tasmanian coastline. (v) Coastal radio stations in the International VHF Maritime Mobile Radiotelephone Service operated by various Marine Boards for ship-to-shore communications with overseas ships. (vi) Fixed links operated by Telecom Australia, the Hydro-Electric Commission, etc. (vii) Amateur service (service of self-training, intercommunication and technical investigations carried on by amateurs, that is by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest).

A new category of licence, the Citizens Band Radio Service, became available from 1 July 1977. The Service is defined as: 'A private, two-way short distance voice communication (radiotelephony) service of fixed, land mobile and portable stations for personal and business activities'. There were 18 high frequency channels allocated within the frequency range 27·015 to 27·225 Megahertz and 40 ultra-high frequency channels were allocated from 476·425 to 477·400 Megahertz. The C.B.R.S. has shown a rapid growth in popularity from persons engaged in all walks of life. The number of sets allowable for each licence has been increased to five and the average number of sets per licence was two at 30 June 1979.

The following table shows the number of interference complaints received by the Postal and Telecommunications Department during the year 1979-80:

**Interference Complaints, Tasmania**

Year 1979-80	Broadcast 164	Television 465	Radio communication services 81
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### **RADIO AND TELEVISION SERVICES**

Radio broadcasting and television falls within the jurisdiction of the Federal Government and is one of the responsibilities of the Minister for Post and Telecommunications. Federal bodies which are directly involved include the Postal and Telecommunications Department, the Australian Broadcasting Commission, the Australian Broadcasting Tribunal, the Australian Telecommunications Commission and the Special Broadcasting Service.

#### **Types of Services**

Basically the Australian broadcasting and television system consists of three types of service comprising:

- (i) national broadcasting and television stations funded by the Federal Government;
- (ii) commercial broadcasting and television stations operated by companies under licence; and
- (iii) public stations operated by corporations under licence on a non-profit basis.

#### **Regulation**

Provisions contained in the *Broadcasting and Television Act 1942* govern the establishment and operation of all stations. The *Postal and Telecommunications Department* is responsible for planning of the overall system, for the submission of planning proposals for consideration by the Minister, for all matters relating to the technical operation of stations and for the investigation of interference to the transmission and reception of programs.

In relation to the national service, the *Australian Broadcasting Commission* is required to provide programs for transmission over stations made available by the *Australian Telecommunications Commission* and to supply and operate the studio equipment necessary for the purpose. The *Australian Broadcasting Tribunal* is responsible for the licensing and supervision of the operation (other than the technical equipment) of all stations other than



national stations. In particular, the Tribunal is required to conduct public inquiries into the granting of licences following the invitation of applications by the Minister, and into the renewal of licences, the setting of standards of broadcasting practices, alleged breaches of licence conditions and such other matters as the Minister may direct. Subject to the conduct of such inquiries, the Tribunal is empowered to grant, renew, suspend or revoke licences and to determine program and advertising standards applicable to licensed stations.

### The National Services

The national services (both radio and television) are provided by the Australian Broadcasting Commission which has sole responsibility for program material; the actual transmitters are operated by the Australian Telecommunications Commission.

### Commercial Broadcasting

Commercial radio and television broadcasting stations are operated by companies under licences granted by the Australian Broadcasting Tribunal. Their technical operating conditions are determined by the Minister for Post and Telecommunications. The stations obtain income from the broadcasting of advertisements. The fee for a licence is \$200 plus an amount based on the gross earnings from advertising during the preceding financial year, assessed on a sliding scale varying from 1 per cent for amounts up to \$0.5m to 6.0 per cent on amounts exceeding \$5.0m.

### Broadcasting Standards

Commercial radio and television stations are required to maintain standards set by the Australian Broadcasting Tribunal. These standards include requirements relating to the acceptability of program material, duration and suitability of advertisements and special provisions relating to children's programs.

### Public Broadcasting

On 5 April 1978 the Minister for Post and Telecommunications outlined the Government's policy objectives for public broadcasting. He stated that the system as a whole should '... cater for and reflect the widest possible spectrum of information, opinions, values and interests in Australian society ...' He said that the aim of public broadcasting was to ensure this diversity by serving specialised audiences and providing programming choices which the national and commercial sectors were not able to provide. The new public sector, therefore, must be complementary and supplementary to the national and private sectors.

### Category of Television Programs

The following table shows, as varying proportions of transmission time, the types of programs televised in Tasmania:

Category of Television Programs by  
Proportion of Transmission Time: Tasmania, 1979  
(Source: Australian Broadcasting Tribunal)

Program category	Commercial programs	National programs
	per cent	per cent
Cinema movies .....	13.6	3.6
Other drama .....	30.7	18.1
Light entertainment .....	16.6	9.5
Sport .....	10.4	16.0
News .....	3.7	7.2
Children .....	6.1	16.9
Family activities .....	2.3	1.5
Information .....	2.4	8.3
Current affairs .....	4.1	4.9
Political matter .....	0.1	—
Religious matter .....	2.2	1.3
The Arts .....	—	2.5
Education .....	0.2	10.2
Advertising .....	7.6	—
Total .....	100.0	100.0

## Television Stations in Operation

The next table gives details of the television stations in operation:

Television Stations in Operation, 30 June 1980

Call sign and channel	Area	Transmitter location	Height above sea level—top of aerial (metres)
NATIONAL			
ABT 2.....	Hobart	Mt Wellington	1 344
ABNT 3 (a).....	N.E. Tasmania	Mt Barrow	1 457
ABKT 11 (a).....	King Island	Gentle Annie Hill	245
COMMERCIAL			
TVT 6.....	Hobart	Mt Wellington	1 323
TNT 9.....	N.E. Tasmania	Mt Barrow	1 419

(a) Transmits programs originating from ABT 2.

## Relay of Television Programs from Other States

Tasmania is linked with Victoria by a broadband radio link installed by the Australian Telecommunications Commission which enables the direct relay of television programs from the mainland states.

## Microwave Links, Intrastate Relays and Translator Stations

The prime sources of programs in Hobart are the commercial and national studios which are linked to their Mt Wellington transmitters (TVT6 and ABT2) by microwave links; the commercial studio in Launceston feeds programs to its Mt Barrow transmitter (TNT9) by the same method. As there is no national studio at Launceston, the transmitter on Mt Barrow (ABNT3) relays the Hobart national programs through the broadband radio link. A similar service is also available to commercial stations.

Tasmania, due to its terrain, has areas where television reception direct from the Mt Wellington or Mt Barrow transmitters is either difficult or impossible. To provide good reception in such areas, translator stations, which are low-powered stations receiving signals from a parent station and re-transmitting on a different frequency to areas with poor reception, have been installed as shown in the following table. Translator stations cannot broadcast directly. The next table shows translator stations in operation and the areas served:

Television Translator Stations in Operation at 30 June 1980

Area served	Parent station		Local channel	
	National	Commercial	National	Commercial
Burnie.....	ABNT 3	TNT 9	4	10
Derby.....	..	TNT 9	..	11
Lileah.....	ABNT 3	TNT 9	8	6
Maydena.....	..	TVT 6	..	8
Queenstown-Zeehan.....	ABT 2	TVT 6	4	8
Rosebery-Renison Bell.....	ABT 2	TVT 6	1	10
Savage River-Luina.....	ABNT 3	TNT 9	4	7
Smithton.....	ABNT 3	TNT 9	4	11
South Launceston.....	ABNT 3	TNT 9	1	11
St Helens.....	ABNT 3	TNT 9	0	7
St Marys-Fingal Valley.....	ABNT 3	TNT 9	1	11
Strahan.....	ABT 2	..	10	..
Strathgordon.....	ABT 2	TVT 6	5	8
Swansea-Bicheno.....	ABT 2	TVT 6	4	8
Taroona.....	..	TVT 6	..	8
Waratah.....	ABNT 3	TNT 9	2	11
Wynyard.....	ABNT 3	TNT 9	1	5A

## Radio Stations in Operation

The following table gives details of the radio stations in operation in Tasmania:

Radio Stations in Operation at 30 June 1980

Call sign	Classification	Location	Hours of service (weekly)
7ZL.....	National	Hobart	133-00
7ZR.....	National	Hobart	133-00
7NT.....	National	Launceston	133-00
7QN(a).....	National	Queenstown	133-00
7FG (a).....	National	Fingal Valley	133-00
7SH (a).....	National	St Helens	133-00
7HO.....	Commercial	Hobart	168-00
7HT.....	Commercial	Hobart	168-00
7AD.....	Commercial	Devonport	116-30
7BU.....	Commercial	Burnie	113-30
7EX.....	Commercial	Launceston	148-00
7LA.....	Commercial	Launceston	139-00
7QT.....	Commercial	Queenstown	77-00
7SD.....	Commercial	Scottsdale	116-30
7CAE.....	Public	Hobart	77-30
7HFC-FM (b).....	Public	Hobart	48-30

(a) Transmits, in the main, programs originating from 7NT.

(b) Commenced operation in 1980.

Tasmania's first F.M. (frequency modulated) station, 7CAE-FM Hobart, began regular broadcasting in February 1977 on a frequency of 92.1 MHz. A second FM station (7HFC-FM), operated by the Hope Foundation Ltd, commenced regular broadcasting during 1980. The ABC's FM service was expected to be extended to Tasmania during 1981.

Although there are areas of poor reception due to difficult terrain, most of Tasmania receives a satisfactory radio service from one or more of the above stations. In addition, the northern part of the State receives a service from some mainland stations. The structure and population distribution in the State has given rise to a regional pattern of radio stations with concentrations in Hobart and Launceston and outlying stations in the north-east, north-west and west.

## Further References

*ABS publications produced by the Tasmanian Office*

Trade and Shipping, Tasmania (5401.6) (annual, 1976-77 released 27-11-78, 40 pp.).

Motor Vehicle Registrations, Tasmania (9301.6) (monthly, Nov. 1980 released 8-1-81, 6 pp.).

Motor Vehicle Census, Tasmania (9302.6) (irregular, September 1979 released 12-5-80, 18 pp.).

Road Traffic Accidents Involving Casualties, Tasmania (9401.6) (quarterly, June quarter 1980 released 31-10-80, 7 pp.).

Road Traffic Accidents Involving Casualties, Tasmania (9402.6) (half yearly, June 1980 released 17-11-80, 10 pp.).

*ABS publications produced by the Canberra Office*

Rail, Bus and Air Transport (9201.0) (annual, 1977-78 released 21-7-80, 29 pp.).

Overseas Shipping (9207.0) (annual, 1977-78 and 1978-79 released 1-8-80, 33 pp.).

Registration of New Motor Vehicles (Preliminary) (9301.0) (monthly, Oct. 1980 released 26-11-80, 2 pp.).

Motor Vehicle Registrations (9303.0) (monthly, Oct. 1980 released 15-12-80, 14 pp.).

Motor Vehicle Registrations (9304.0) (annual, 1979-80 released 20-11-80, 21 pp.).

Road Accident Fatalities (9401.0) (monthly, Dec. 1980 released 22-1-81, 2 pp.).

## **Chapter 12**

### **PRIVATE FINANCE**

#### **INSURANCE**

##### **General**

##### *Definitions*

The following data on insurance are divided into life insurance and insurance other than life; i.e. fire, marine and general insurance. No distinction is made between insurance and assurance, the former term being used in all contexts.

##### *Legislation*

Section 51 of the Federal Constitution confers the necessary powers on the Federal Parliament to legislate with respect to 'insurance other than state insurance; also state insurance extending beyond the limits of the state concerned'. The principal Federal legislation affecting current insurance business is as follows:

*Life Insurance Act 1945:* This Act provides for uniform control throughout Australia of life insurance business other than business transacted by state government insurance offices, friendly societies and trade unions providing benefits for members and dependants. Also excluded is business in relation to superannuation benefits provided wholly by an organisation established by employers, employees or both.

Under the Act each company must maintain at least one office in each State or Territory in which it conducts life insurance business. Companies are also required to set up statutory funds in respect of their life insurance business in Australia and all amounts received in respect of this business must be paid to, and form part of, the assets of these funds. The assets of the statutory funds can only be used to meet liabilities or expenses relating to the life insurance business and, in certain circumstances, the payment of dividends to shareholders.

*Insurance Act 1973:* This Act restricts the right to carry on insurance business to authorised companies and Lloyd's underwriters and makes arrangements aimed at ensuring that these are at all times financially sound. Insurance business carried on by the Federal Government, a state government or by a number of named government or semi-government authorities is exempt. The Act does not extend to life insurance business, registered medical or hospital benefits organisations and certain other bodies.

##### **Life Insurance**

Since 1947 returns lodged under the *Life Insurance Act 1945* have been used to compile life insurance statistics. In Tasmania, the Government Insurance Board transacts a limited form of life insurance only (in respect of home mortgage repayments of purchasers of Housing Department dwellings) and tables that follow refer to operations of enterprises exclusively in the private sector. The transactions in the next table are concerned with Tasmania as the 'State of issue' of the policies, not necessarily as the 'State of risk'.

## Life Insurance Transactions (Excluding Annuities), Tasmania (a)

Particulars	1974	1975	1976	1977	1978	1979
ORDINARY AND INDUSTRIAL BUSINESS (b)						
New policies issued—						
Number .....	19 210	17 381	15 377	14 898	13 984	12 934
Sum insured .....	\$m 180.6	200.7	223.2	253.5	273.9	281.6
Annual premiums .....	\$m 3.1	3.2	3.0	3.4	3.3	3.2
Policies discontinued or reduced—						
Number .....	19 522	20 414	21 803	21 953	22 044	21 936
Sum insured .....	\$m 71.5	87.8	106.5	123.1	128.0	177.9
Annual premiums .....	\$m 1.7	1.9	2.3	2.5	2.6	2.7
SUPERANNUATION BUSINESS						
New policies issued—						
Number .....	2 635	3 032	3 118	2 933	2 403	1 982
Sum insured .....	\$m 88.3	123.6	125.8	175.8	124.2	156.9
Annual premiums .....	\$m 2.7	3.8	3.6	5.9	3.8	3.8
Policies discontinued or reduced—						
Number .....	1 629	1 843	1 995	1 979	4 307	2 014
Sum insured .....	\$m 32.2	38.3	47.4	61.2	62.3	59.2
Annual premiums .....	\$m 0.9	1.1	1.3	1.7	1.9	2.0
TOTAL BUSINESS						
New policies issued—						
Number .....	21 845	20 413	18 495	17 831	16 387	14 916
Sum insured .....	\$m 268.8	324.3	349.0	429.2	398.1	438.5
Annual premiums .....	\$m 5.8	7.0	6.6	9.1	7.1	7.0
Policies discontinued or reduced—						
Number .....	21 151	22 257	23 798	23 932	26 351	23 950
Sum insured .....	\$m 103.7	125.9	153.9	184.3	190.3	237.1
Annual premiums .....	\$m 2.6	3.0	3.7	4.2	4.5	4.7
NEW LOANS PAID OVER (EXCLUDING ADVANCES OF PREMIUMS)						
On mortgage of real estate ...	\$'000 3 509	2 983	4 120	3 861	5 668	4 561
On companies' policies .....	\$'000 2 432	1 863	1 949	2 363	2 126	2 122
On other securities .....	\$'000 365	178	212	196	252	213
Total .....	\$'000 6 307	5 027	6 282	6 420	8 046	6 896

(a) These figures are annual aggregates of those published monthly in *Life Insurance, Australia* (Catalogue no. 5021.0). They are not comparable with figures published annually in *Life Insurance* (Catalogue no. 5622.0) which contains information not related to uniform accounting periods but to the companies' balance dates between 1 January and 31 December of the year shown.

(b) Industrial business refers, in the main, to policies on which the premiums are collected as regular instalments by agents on commission. As the significance of industrial insurance has been declining, and as more businesses have been transferring it to their ordinary registers, only a few businesses now maintain registers of industrial business. In order to preserve the confidentiality of these businesses' operations it has become necessary to combine the details of ordinary and industrial business.

## Fire, Marine and General Insurance

Information on insurance, other than life, is compiled from returns provided by insurance companies transacting fire, marine and general insurance business in Tasmania (including the Tasmanian Government Insurance Office). Statistics that follow relate to financial years of companies ending within the period shown and to policies issued in Tasmania and not necessarily to those for which the risk is situated in Tasmania.

## Definitions

Premiums represent the full amount receivable in respect of policies issued and renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year.

Claims include payments made during the year, plus the estimated amount of outstanding claims at the end of the year, less the estimated amount of outstanding claims at the beginning of the year.

Contributions to fire brigades, commission and agents' charges, and expenses of management are those amounts actually paid during the year.

Taxation represents payments made during the year and includes pay-roll tax, licence fees, etc. Stamp duty and income tax are included in this item up to 1973-74, but excluded from 1974-75.

### *Selected Revenue and Expenditure Items*

The following table should not be construed as a profit and loss statement; selected revenue and expenditure items only have been used.

#### **Fire, Marine and General Insurance, Tasmania ('000)**

Particulars	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78
Premiums (less returns, rebates and bonuses) .....	30 825	34 958	44 762	51 199	72 152	74 502
Interest, dividends, rents .....	660	771	(a)	(a)	(a)	(a)
Total (selected revenue items) .....	31 485	35 729	44 762	51 199	72 152	74 502
Claims (less amounts recoverable) .....	18 249	23 507	29 979	29 552	42 010	50 279
Contributions to fire brigades .....	979	1 069	1 371	1 529	2 483	127
Commission and agents' charges .....	2 999	3 330	4 002	4 509	4 472	5 774
Expenses of management .....	6 364	6 875	8 102	8 100	11 844	12 898
Taxation .....	780	1 041	(b) 376	336	627	312
Total (selected expenditure items) .....	29 371	35 822	44 217 (b) (c)	44 238 (c)	61 420 (c)	69 665 (c)

(a) From 1974-75 figures for this item are available only for Australia as a whole due to a change in collection methods.

(b) Refer to definition of Taxation above. Figures from 1974-75 are not comparable with those for previous years.

(c) Includes other underwriting expenses of \$386 000 in 1974-75, \$212 000 in 1975-76, \$16 000 in 1976-77 and \$275 000 in 1977-78.

### *Types of Insurance*

The next table shows premiums and claims according to the class of insurance business transacted in 1977-78. ('Premiums' and 'Claims' have been compiled in accordance with the definitions introducing the section.)

#### **Fire, Marine and General Insurance, Tasmania Premiums and Claims for Each Type of Insurance, 1977-78 (\$'000)**

Class of business	Premiums	Claims	Class of business	Premiums	Claims
Motor vehicle comprehensive .....			All risks/baggage .....	555	367
(a) .....	20 173	14 594	Plate glass .....	268	192
Employers' liability .....	18 067	11 122	Professional indemnity .....	217	55
Compulsory third party (b) .....	10 565	9 486	Livestock .....	125	94
Fire and sprinkler leakage .....	5 929	4 500	Contractors' all risks .....	369	175
Houseowners' and house- holders' comprehensive .....	7 832	4 965	Guarantee .....	39	6
Marine (hull and cargo) .....	2 844	1 193	Product liability .....	38	5
Personal accident .....	2 176	928	Fruit crop and hailstone (c) .....	n.p.	n.p.
Loss of profits .....	1 149	966	Aviation (c) .....	n.p.	n.p.
Public liability .....	1 446	525	Other .....	1 373	534
Burglary .....	642	213			
Boiler, engineering and machine breakdown .....	662	353			
			Total .....	74 502	50 279

(a) Includes motor cycles.

(b) Motor vehicles only. The Motor Accident Insurance Board accepted all rights, obligations and liabilities in respect of Compulsory Third Party Insurance from 1 October 1974.

(c) Confidential—included in 'Other'.

**Ratio of Claims to Gross Premiums:** The following table shows the ratio of claims to premiums for the more important classes of business over a three-year period:

**Fire, Marine and General Insurance, Tasmania**  
**Ratio of Claims to Premiums (a)**  
**(Per Cent)**

Class of business	1975-76	1976-77	1977-78
Motor vehicle comprehensive (including motor cycles) . . . .	62.0	60.4	72.3
Employers' liability . . . . .	58.6	65.3	61.6
Compulsory third party (b) . . . . .	81.0	67.5	89.8
Fire and sprinkler leakage . . . . .	27.7	36.4	75.9
Houseowners' and householders' comprehensive . . . . .	51.0	58.3	63.4
Marine (hull and cargo) . . . . .	72.1	32.6	r 41.9
Personal accident . . . . .	41.1	44.3	r 42.6
Loss of profits . . . . .	20.9	44.0	r 84.1
Public liability . . . . .	20.3	32.0	r 36.3
Burglary . . . . .	23.3	25.3	r 33.2
Boiler, engineering and machine breakdown . . . . .	51.7	36.3	r 53.3
All classes . . . . .	57.7	58.2	67.5

(a) See beginning of section for definition of claims and premiums.

(b) Motor vehicles only.

## BANKING AND EXCHANGE RATES

### Types of Banks

#### General

Banks in Tasmania can be classified by ownership as follows: (i) Government—The Reserve Bank of Australia, the Commonwealth Development Bank of Australia, the Commonwealth Trading Bank of Australia and the Commonwealth Savings Bank; (ii) Private—the private trading banks and the private savings banks; and (iii) Trustee—The Savings Bank of Tasmania (previously the Hobart Savings Bank) and the Launceston Bank for Savings. The Agricultural Bank is *not* a bank for the purpose of these statistics.

For statistical purposes such a classification is not helpful since banks, both government and private, may be engaged in the same type of activity. Hence, the classification in use is one which groups banks according to their type of activity, not according to their ownership. The major banking statistics for the State are presented in two distinct series under the headings 'Trading Banks' and 'Savings Bank'.

#### Trading Banks

The following seven institutions in Tasmania are classified, for statistical purposes, as 'trading banks': Commonwealth Trading Bank of Australia; Australia and New Zealand Banking Group; Bank of New South Wales; The Commercial Bank of Australia Ltd; The Commercial Banking Company of Sydney Ltd; The National Bank of Australasia Ltd; and The Bank of Adelaide.

#### Savings Banks

In the 1950s, only three savings banks operated branches in Tasmania: Hobart Savings Bank (now The Savings Bank of Tasmania), Launceston Bank for Savings (both trustee savings banks) and the Commonwealth Savings Bank. The trustee savings banks date from early colonial days, the Launceston Bank opening in 1835, and the Hobart Bank in 1845.

In recent years, private trading banks have opened savings bank subsidiaries in the State, the current list of such banks being: Australian and New Zealand Savings Bank Ltd; The Bank of Adelaide Savings Bank Ltd; Bank of New South Wales Savings Bank Ltd; The Commercial Savings Bank of Australia Ltd; C.B.C. Savings Bank Ltd; and The National Savings Bank Ltd.

Savings banks also offer cheque facilities to customers; however, for statistical purposes their cheque operations are included in 'savings bank statistics'.

### Transactions of Trading Banks

The accompanying table summarises the principal statistics relating to all trading banks in Tasmania for a five-year period. The following definitions apply:

- (i) Deposits—a bank liabilities item. The figure is the average, for the year, of *balances* read at weekly intervals.
- (ii) Loans, advances and bills discounted, etc.—a bank assets item. The figure is the average, for the year, of *balances* read at weekly intervals.
- (iii) Debits to customers' accounts—mainly the total of all cheques drawn by customers during a given period. The figure is the average, for the year, of such weekly entries.

**Transactions: All Trading Banks in Tasmania**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
NUMBER					
Branches open at 30 June .....	101	104	105	106	106
DEPOSITS, ADVANCES AND DEBITS TO CUSTOMERS' ACCOUNTS: WEEKLY AVERAGES (\$'000)					
Deposits (a)—					
Federal and State Governments .....	6 499	12 919	33 442	25 920	23 722
Other—					
Fixed .....	112 543	133 357	168 637	193 883	217 349
Current—Bearing interest .....	11 031	14 617	16 723	18 519	20 670
Not bearing interest .....	99 781	116 486	129 811	137 451	153 439
Total .....	229 851	277 377	348 613	375 773	415 180
Loans, advances and bills discounted (a)					
(b) .....	137 189	157 951	207 635	250 144	300 811
Debits to customers' accounts (c) .....	119 447	150 536	179 932	193 310	220 074

(a) The average, for the month or year, of *balances* read at weekly intervals.

(b) Loans, advances and bills discounted, etc.; excludes loans to authorised dealers in the short-term money market.

(c) Excludes debits to Federal and State Government accounts at Hobart branches. In addition to trading bank transactions, those of the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank are included in this item.

The table below gives a classification of trading bank advances outstanding within Tasmania by type of borrower resident within Australia, and in total for non-residents of Australia.

**Trading Banks: Classification of Advances Outstanding within Tasmania (\$'000)**

Type of advance	At second Wednesday in July			
	1976	1977	1978 (a)	1979 (a)
BORROWERS RESIDENT WITHIN AUSTRALIA				
Business advances—				
Agriculture, grazing and dairying—				
Sheep grazing .....	7 589	8 708	8 400	8 700
Dairying and pig raising .....	7 185	7 203	7 300	7 900
Other .....	14 738	16 346	20 000	21 600
Total .....	29 512	32 257	35 700	38 200
Manufacturing .....	29 207	28 208	33 200	43 000
Transport, storage and communication .....	4 289	4 316	5 500	5 700
Finance—				
Building and housing societies .....	624	390	400	300
Pastoral and finance companies .....	472	728	300	300
Hire purchase and other finance companies .....	916	1 293	1 500	1 200
Other .....	886	1 199	2 400	3 000
Total .....	2 898	3 610	4 600	4 800



**Trading Banks: Classification of Advances Outstanding within Tasmania—continued**  
(\$'000)

Type of advance	At second Wednesday in July			
	1976	1977	1978 (a)	1979 (a)
<b>BORROWERS RESIDENT WITHIN AUSTRALIA</b>				
Retail and wholesale trade .....	33 337	38 200	43 600	54 600
Building and construction .....	6 916	10 282	11 000	12 400
Other business .....	27 387	40 364	47 500	49 600
Unclassified .....	539	1 771	2 800	3 700
<b>Total business advances .....</b>	<b>134 085</b>	<b>159 008</b>	<b>183 800</b>	<b>212 100</b>
Advances to public authorities (excl. Federal and state governments) .....	1 372	983	600	1 700
Personal advances—				
Building or purchasing own home (individuals) .....	12 337	15 445	19 700	17 900
All other .....	39 933	57 223	75 900	93 800
<b>Total personal advances .....</b>	<b>52 270</b>	<b>72 668</b>	<b>95 600</b>	<b>111 800</b>
Advances to non-profit organisations .....	1 816	1 891	2 000	3 100
<b>Total advances to resident borrowers ..</b>	<b>189 543</b>	<b>234 550</b>	<b>282 100</b>	<b>328 600</b>
<b>BORROWERS NON-RESIDENT WITHIN AUSTRALIA</b>				
Total non-resident borrowers .....	6	25	—	—
<b>TOTAL ADVANCES TO RESIDENT AND NON-RESIDENT BORROWERS</b>				
<b>Grand total .....</b>	<b>183 549</b>	<b>234 575</b>	<b>282 100</b>	<b>328 700</b>

(a) Figures rounded to the nearest one hundred thousand.

### Interest Rates and Security Yields

The next table shows the interest rates available on fixed deposits, the interest yield from treasury notes and the yield from government securities:

**Interest Rates and Security Yields, Tasmania**  
(Per Cent Per Annum)

Particulars	Rate			
	June 1976	June 1977	June 1978	June 1979
Trading banks—				
Fixed deposits (less than \$50 000)—				
3 months and less than 6 months .....	7-00-8-25	7-75-8-25	7-50-7-75	7-25-7-75
6 months and less than 12 months .....	7-25-8-75	8-25-9-00	8-00-9-00	7-75-8-50
12 months and less than 18 months .....	7-25-8-75	8-25-9-00	8-00-9-00	7-75-8-50
18 months and less than 2 years .....	7-25-8-75			
2 years to 4 years .....	8-25-9-50	8-00-9-50	8-00-9-50	8-00-9-00
Fixed deposits (\$50 000 and over)—				
30 days to 4 years (a) .....	10-00	10-00	10-00	10-00
Federal Government securities yield—				
Non-rebateable bonds (b)—				
2 years .....	8-47	9-88	8-83	9-94
10 years .....	9-99	10-41	9-10	10-00
20 years .....	10-20	10-48	9-10	10-10
Treasury notes (issue yield)—				
13 week notes .....	6-98	8-60	8-35	9-02
26 week notes .....	7-25	9-12	8-75	9-30

(a) Subject to this maximum, actual rates are a matter for negotiation between banks and their customers.

(b) Yields shown are average for week centred on last Wednesday of month and exclude effect of brokerage.

## Savings Banks

The following table summarises the principal statistics relating to savings banks in Tasmania. Deposits are compiled on a basis different from that used in the case of trading banks. 'Deposits lodged' is the total inflow of deposits during the year, and 'depositors' balances' is a single liability reading taken at the end of the year.

The number of operative accounts excludes school bank accounts and small inoperative accounts. The other items in the table relating to depositors' balances, etc., relate to all accounts including school bank accounts and small inoperative accounts.

All Savings Banks, Tasmania

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Branches open (a) .....	153	159	162	165	165
Operative accounts (a) .....	591	606	618	632	651
Deposits lodged .....	707 421	797 315	921 919	1 030 820	1 185 564
Interest added .....	17 085	20 878	23 662	27 222	30 338
Excess of deposits over withdrawals .....	37 213	27 412	22 853	26 101	26 960
Depositors' balances (a) .....	382 326	430 618	477 134	530 457	587 755
Per head of population— Depositors' balances (a) .....	944	1 057	1 164	1 282	1 414

(a) At end of year.

At 30 June 1979, the balances outstanding on housing loans made by savings banks to individuals and to building societies were \$239 261 000 and \$1 327 000, respectively.

The next table gives details of housing finance transactions by savings banks in Tasmania:

Savings Banks: Housing Finance Transactions, Tasmania (a)

Period	Loans approved to individuals for—						Cancellation of loans previously approved to individuals for housing	
	Construction or purchases of new dwellings		Purchases of established dwellings		Alter- ations and ad- ditions	Total		
	Number (b)	Amount (c)	Number (b)	Amount (c)	Amount	Amount	Number	Amount
1974-75 .....	689	\$'000 9 695	2 291	\$'000 28 394	\$'000 957	\$'000 39 046	202	\$'000 2 302
1975-76 .....	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	187	2 637
1976-77 .....	768	13 258	2 131	36 974	2 213	52 445	162	2 385
1977-78 .....	779	14 767	2 113	39 617	2 752	57 136	185	2 826
1978-79 .....	923	20 667	2 670	55 191	2 588	78 446	130	2 272
1979-80 .....	815	18 414	2 317	48 985	2 496	69 895	136	2 348

(a) The statistics prior to 1975-76 are not strictly comparable with those for later years. The former categories 'Dwellings not previously occupied' and 'Dwellings previously occupied' have been defined more precisely and are replaced by the categories 'Construction or purchases of new dwellings' and 'Purchases of established dwellings', respectively. Also, loans approved for alterations and additions estimated to cost \$10 000 or more are included in the category 'Alterations and additions', whereas previously such loans were included in the categories 'Previously occupied' and 'Not previously occupied'. Total figures for 1975-76 are unavailable as the changes were implemented in October of that year.

(b) Number of loans for dwelling units approved for first mortgage finance only.

(c) Includes second mortgage finance to complete original purchase or construction.

## Interest Rates

The next table shows the maximum rates of interest paid to depositors or charged to borrowers with home mortgages by The Savings Bank of Tasmania. Interest rates paid to depositors or charged to borrowers with home mortgages by the Launceston Bank for

Savings, the Commonwealth Savings Bank and the savings bank subsidiaries of the private trading banks, may vary marginally from the rates shown in this table.

**The Savings Bank of Tasmania: Maximum Interest Rates (a)**  
(Per Cent Per Annum)

Date of change in rate	On savings accounts (b)	On home mortgages	Date of change in rate	On savings accounts (b)	On home mortgages
October 1973 .....	(c) 4.00	(d) 8.00	March 1978 .....	(e) 4.00	(g) 10.00
August 1974 .....	(c) 4.00	(d) 10.00	January 1979 .....	(e) 4.00	(g) 9.50
April 1975 .....	(e) 4.00	(f) 9.50	May 1980 .....	(e) 4.00	(g) 10.00
February 1976 .....	(e) 4.00	(g) 10.50	August 1980 .....	(e) 4.00	(g) 10.50

(a) Operative from first day of month shown.

(b) From February 1966, fixed deposit rates have been 0.25 per cent greater than trading banks rates.

(c) Effective on accounts to \$4 000.

(d) Effective for loans to \$12 500.

(e) Effective on accounts to \$4 000. From \$4 001 to \$20 000 the interest rate was 6.25 per cent.

(f) Effective rate for loans to \$12 500. For loans from \$12 501 to \$20 000 the rate was 11.0 per cent. For loans over \$20 000 the rate was 11.5 per cent.

(g) Effective for all loans to \$100 000.

### Overseas Exchange Rates

The next table shows average overseas exchange rates operative for recent periods:

**Exchange Rates (a): Average for Period Shown, Overseas Currency Relative to Australian Dollar**

Country	Unit of overseas currency	1975-76	1976-77	1977-78	1978-79
Belgium (b) .....	Francs	50.11	42.92	37.88	34.93
Canada .....	Dollars	1.26	1.16	1.23	1.32
France .....	Francs	5.62	5.67	5.34	4.88
Germany, Federal Republic of .....	Deutsche marks	3.21	2.78	2.43	2.15
Hong Kong .....	Dollars	6.25	5.45	5.19	5.46
India .....	Rupees	11.14	10.12	9.49	9.13
Italy .....	Lire	925	990	976	946
Japan .....	Yen	376.06	327.91	271.90	225.84
Netherlands .....	Guilders	3.34	2.91	2.60	2.33
New Zealand .....	Dollars	1.19	1.14	1.12	1.07
Pakistan .....	Rupees	n.a.	11.13	10.91	11.11
Singapore .....	Dollars	3.09	2.71	2.65	2.48
South Africa .....	Rands	1.038	0.990	0.970	0.968
Sri Lanka .....	Rupees	9.79	9.48	13.63	16.82
Switzerland .....	Francs	3.25	2.85	2.36	1.89
U.S.A. ....	Dollars	1.26	1.15	1.13	1.13
United Kingdom .....	Pound stg	0.630	0.670	0.620	0.565

(a) Average telegraphic transfer selling rates at Sydney. Average rates are not available for China, Malaysia and U.S.S.R.; however, daily quotations are available on application to any trading bank.

(b) Two rates have been quoted for Belgium from 20.9.71. The rate shown for these periods is the financial rate used for trade transactions.

### INSTALMENT CREDIT AND OTHER FINANCING

#### Finance Companies

*Finance Companies:* In these statistics finance companies are incorporated companies mainly engaged in providing, to the general public, the following credit facilities: (i) instalment credit for retail sales; (ii) personal loans; (iii) wholesale finance; (iv) factoring; (v) other consumer and commercial loans; (vi) financial leasing of business equipment and plant; and (vii) bills of exchange.

The definitions associated with the statistics are set out in considerable detail in the bulletin *Finance Companies Transactions* (Cat. No. 5615.0) published by the Canberra Office of the Bureau.

**Finance Companies: Transactions, Tasmania**  
(\$m)

Year	Instalment credit for retail sales	Wholesale finance	Other consumer and commercial loans		Total all contracts
			Contracts including charges (a)	Contracts excluding charges (b)	
AMOUNT FINANCED					
1974-75 .....	44.4	65.7	r 12.8		r 122.9
1975-76 .....	52.4	79.7	r 21.1		r 153.2
1976-77 .....	62.2	114.5	49.5		226.2
1977-78 .....	61.1	r 118.6	r 48.3		r 228.0
1978-79 (c) .....	55.5	123.1	49.0		227.6
1979-80 .....	46.9	127.9	55.4		230.2

**COLLECTIONS AND OTHER LIQUIDATIONS OF BALANCES**

1974-75 .....	46.2	64.2	14.6	3.2	128.2
1975-76 .....	60.5	77.1	14.8	4.4	156.8
1976-77 .....	75.7	110.4	24.0	10.2	220.3
1977-78 .....	83.7	r 116.9	r 35.3	r 17.9	253.8
1978-79 (c) .....	85.8	123.2	47.9	14.0	270.9
1979-80 .....	81.6	127.9	54.5	13.3	277.2

**BALANCES OUTSTANDING AT END OF YEAR**

1974-75 .....	63.5	8.2	18.0	6.4	96.1
1975-76 .....	78.0	12.4	23.7	9.6	123.7
1976-77 .....	95.5	19.5	43.7	20.6	179.3
1977-78 .....	104.0	23.6	56.9	20.4	205.0
1978-79 (c) .....	95.7	24.8	68.1	23.6	212.2
1979-80 .....	86.2	25.1	79.2	26.2	216.6

(a) Includes details of personal loans.

(b) Includes factoring.

(c) Figures for 1978-79 and subsequent years are not comparable with those for earlier years because of changes in the scope and coverage of the statistics.

The value of capital goods (business equipment and plant) leased by finance companies, over a five-year period, is shown in the table below:

**Finance Companies: Business Equipment and Plant on Lease, Tasmania**  
(\$m)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Value of goods leased during period .....	14.8	18.1	25.6	32.0	40.0	54.2
Balances outstanding at end of year .....	27.3	35.2	46.1	63.9	87.1	116.6

In the following table the amount financed in respect of instalment credit for retail sales agreements (a single item in previous tables) is further classified by type of commodity.

**Finance Companies: Instalment Credit for Retail Sales, Tasmania**  
(\$m)

Year	Amount financed during year					Cash collections and other liquidations during year	Balances outstanding at end of year
	Motor vehicles, etc.			Household and personal goods	Total		
	New	Used	Total (a)				
1974-75 .....	14.0	22.8	40.4	4.0	44.4	46.2	63.5
1975-76 .....	14.1	25.5	45.6	6.8	52.4	60.5	78.0
1976-77 .....	15.2	32.3	54.7	7.5	62.2	75.7	95.5
1977-78 .....	13.7	34.3	55.0	6.2	61.1	83.7	104.0
1978-79 .....	9.6	31.9	48.7	6.8	55.5	85.8	95.7
1979-80 .....	8.4	26.6	39.8	7.1	46.9	81.6	86.2

(a) Total also includes new and used motor cycles, boats, caravans and trailers, motor parts and accessories.

### Instalment Credit for Retail Sales in Tasmania

The collection of data on instalment credit transactions began as a series dealing simply with the hire purchase operations of non-retail finance businesses. The series was then expanded, firstly to cover the hire purchase operations of retail businesses and, secondly, to introduce a concept of instalment credit considerably broader than hire purchase. A further stage in development was reached with a redefinition of the term 'instalment credit' and a change in the classification of businesses which operate instalment credit schemes from 'Retail Businesses' and 'Non-Retail Finance Businesses' to 'Finance Companies' and 'Other Businesses'. These changes apply to statistics for 1973-74 and later years.

#### Definitions

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by finance companies or other businesses. In general, the item 'instalment credit' is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account and personal loan schemes which relate primarily to financing of retail sales of goods. The term 'retail sales' relates only to retail sales covered by the censuses of retail establishments; other sales of goods to final purchasers (e.g. plant and equipment) are excluded.

Figures for amounts financed exclude interest, hiring charges, insurance, etc. Figures for balances outstanding and collections and other liquidations include these charges. Details are not available of these charges or of other items (e.g. rebates allowed for early payment, late payment charges and bad debts written off) which affect the reconciliation of the three main instalment credit series: amount financed, collections and other liquidations, and balances outstanding.

Statistics of amounts financed are classified by type of goods, defined as follows: (i) motor vehicles, etc.—new and used motor cars and motor cycles, boats, caravans, trailers, and motor parts and accessories; and (ii) household and personal goods—furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, televisions, musical instruments, bicycles, motor mowers, clothing, etc.

#### Instalment Credit for Retail Sales, Tasmania (a) (Hire Purchase and other Instalment Credit) (\$'000)

Year	Amount financed during period (b)			Balances outstanding at end of period (c)
	Motor vehicles, etc. (d)	Household and personal goods	Total all goods	
FINANCED BY FINANCE COMPANIES				
1976-77 .....	54 738	7 465	62 203	95 463
1977-78 .....	54 967	6 163	61 130	104 029
1978-79 .....	48 714	6 761	55 475	95 716
1979-80 .....	39 814	7 116	46 930	86 164
FINANCED BY OTHER BUSINESSES				
1976-77 .....	174	5 951	6 125	4 137
1977-78 .....	—	5 063	5 063	3 117
1978-79 .....	—	2 753	2 753	1 486
1979-80 .....	—	1 048	1 048	1 495
FINANCED BY ALL BUSINESSES				
1976-77 .....	54 912	13 416	68 328	99 600
1977-78 .....	54 967	11 226	66 193	107 146
1978-79 .....	48 714	9 514	58 228	97 202
1979-80 .....	39 814	8 164	47 978	87 659

(a) Includes time payment, budget account, and personal loan schemes relating primarily to the financing of retail sales.

(b) Excludes hiring charges, interest and insurance.

(c) Includes hiring charges, interest and insurance.

(d) Types of goods included are defined under 'Definitions' preceding the table.

## OTHER PRIVATE FINANCE

## Friendly Societies

## Scope

The details that follow refer to 'ordinary' societies, not to 'special' societies. Ordinary societies are those which provide customary sick and funeral benefits and are subject to actuarial valuation. Special societies restrict their membership to employees of industrial parent organisations and are not subject to actuarial valuation.

*Friendly Health Services (F.H.S.):* This organisation was originally established to administer medical and hospital benefit funds to which members of existing societies could contribute; funds, membership and activities of this description are excluded from statistics of ordinary friendly society activities. F.H.S. later extended its scope to 'ordinary' society activities. Details of the latter only are included in friendly society statistics.

## Membership

Friendly societies were a form of social organisation to help members meet the costs of sickness, burial, etc. at a time when government social services were either meagre or non-existent. Membership reached a maximum (over 22 000 in male lodges) in the pre-depression years but has since steadily declined. From the 1950s, there has been rapid development of various government-encouraged insurance schemes to assist families with hospital and other expenses associated with sickness; such schemes have evolved, in general, outside the framework of the friendly society movement. As there is no uniform accounting period for these societies, details are in respect of membership as at the end of accounting periods ending during the years shown.

With F.H.S. excluded from consideration, it may be seen that: (i) a decline in membership of other ordinary societies has continued (from 6 816 members in 1962 to 2 257 in 1978); and (ii) the average age of members has continued to increase (from 36.7 years in 1920 to 68.6 in 1978).

In the following table male and female members of the F.H.S. Sickness and Assurance Fund and Whole of Life and Endowment Fund have been included.

Friendly Society Membership and Number Who Received Sick Pay, Tasmania, 1978

Particulars	Membership details					Members who received sick pay
	Financial members	Total membership (a)	Average age of members	Admissions	Departures (b)	
	no.	no.	years	no.	no.	no.
All societies (excl. Friendly Health Services)—						
Males .....	2 204	2 207	68.5	2	149	170
Females .....	50	50	72.2	—	1	3
Total .....	2 254	2 257	68.6	2	150	174
Friendly Health Services .....	362	362	35.8	18	39	44
Total all societies .....	2 616	2 619	64.0	20	189	217

(a) Includes financial members but not honorary members.

(b) Includes deaths.

The figures in the next table, which excludes details for F.H.S., show the decline in membership of other ordinary societies.

**Societies, Lodges and Membership, Tasmania (a)**  
(Number)

Particulars	1973	1974	1975	1976	1977	1978
Societies .....	8	8	8	7	7	7
Lodges—Male .....	100	(b) 51	47	35	28	23
Female .....	5	7	7	7	7	7
Benefit members .....	3 509	3 275	3 108	2 546	2 405	2 257
Financial members .....	3 461	3 233	3 090	2 519	2 393	2 254

(a) Friendly Health Services excluded.

(b) Revised method of calculation. Previously some amalgamated branches were double-counted.

**Revenue and Expenditure**

The following tables show the net revenue and expenditure of friendly societies (excluding inter-fund transfers and transfers between districts and lodges) for the accounting years which ended in the years shown.

**Friendly Societies (a): Net Revenue and Expenditure, Tasmania, 1978**  
(\$)

Revenue			Expenditure		
Particulars	Total	Per financial member	Particulars	Total	Per financial member
Members' contributions (b) .....	36 190	13.83	Medical attendance and medicine .....	968	0.37
Interest, rent and dividends .....	116 255	44.44	Sick Pay .....	15 843	6.06
All other income .....	39 794	15.21	Funeral benefits .....	39 549	15.12
			Administration .....	43 635	16.68
			Endowment benefits .....	6 542	2.50
			Other .....	40 289	15.40
Total .....	192 239	73.48	Total .....	146 826	56.13

(a): Includes Friendly Health Services.

(b) Includes levies.

**Friendly Societies (a): Receipts, Expenditure and Accumulated Funds, Tasmania**  
(\$'000)

Year	Net receipts (a)		Net expenditure (b)				Accumulated funds (e)
	Contributions and levies	Total (c)	Sick pay	Funeral benefits	Other (d)	Total	
1973 .....	64	176	25	51	112	188	1 448
1974 .....	56	172	24	43	73	140	1 481
1975 .....	47	r 168	16	33	r 71	r 120	r 1 535
1976 .....	r 60	r 213	18	r 41	r 83	r 142	r 1 601
1977 .....	r 42	r 180	17	37	118	172	r 1 452
1978 .....	36	192	16	40	91	147	1 497

(a) Includes Friendly Health Services.

(b) Excludes inter-fund transfers and transfers between branches within societies.

(c) Comprises: (i) income from investments; (ii) grants received by Friendly Health Services from the ordinary societies; and (iii) other revenue items not specified in the table.

(d) Includes administration and medical attention expenses and endowment benefits paid by societies to members.

(e) The accumulated funds of any year cannot necessarily be reconciled with those of the previous year because of dissolutions and other minor factors.

## Registered Building Societies

**Permanent Societies:** These societies are both savings and deposit-receiving institutions which advance funds for home building or purchase against the security of first mortgages. Those who invest by taking shares or by making deposits are in a separate category from those who borrow to build or buy a home. The following table summarises the transactions of permanent building societies:

Permanent Building Societies, Tasmania (a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
	no.	no.	no.	no.	no.	no.
Operating societies .....	5	5	5	5	5	5
Investing shareholders .....	26 936	35 971	n.p.	n.p.	n.p.	n.p.
Borrowers .....	7 124	6 795	n.p.	n.p.	n.p.	n.p.
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Loans—Advanced .....	17 849	17 145	n.p.	32 677	27 488	42 267
Repaid .....	10 144	10 803	n.p.	26 334	28 012	32 766
Subscriptions—Received .....	30 319	48 564	n.p.	121 580	160 444	214 598
Withdrawn .....	21 109	34 329	n.p.	98 529	143 074	187 559
Liabilities—						
Share capital and subscriptions—						
Non-withdrawable .....	40 379	55 782	n.p.	n.p.	n.p.	n.p.
Withdrawable .....	1 449	1 578	70 286	93 355	110 075	136 854
Reserves .....	24 318	30 002	2 043	2 406	2 890	3 215
Deposits .....	2 442	2 154	40 854	38 135	37 631	49 336
Loans .....			2 599	2 524	1 597	2 720
Other .....			n.p.	n.p.	n.p.	n.p.
Total .....	68 589	89 517	117 602	137 726	154 430	193 840
Assets—						
Loans on mortgage .....	58 381	64 723	86 805	104 803	117 131	141 075
Land and buildings .....	1 440	1 781	2 532	2 671	3 384	8 208
Government securities .....	4 149	3 884	7 093			
Other investments .....	3 954	18 086	19 908	29 519	33 722	44 036
Cash and current deposits .....	129	180	350	143	151	253
Other .....	536	863	914	590	42	268
Total .....	68 589	89 517	117 602	137 726	154 430	193 840

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting period ending during the year shown.

## Co-operative (Terminating) Societies

**Terminating Societies** are societies which, by their rules, are to terminate at a fixed date or when a result specified in their rules is attained. Societies issue members one class of share and require equated monthly instalments towards share capital from members; when a member borrows to build (and only a member may borrow) he is required to pay additional equated monthly instalments, such addition constituting interest only. The regular instalments in respect of share capital are calculated to amount, with interest, to the nominal amount of the member's shares over the life of the society (say 26 or 30 years). If the member takes out shares with a nominal value of \$20 000 then his borrowing ceiling is set at \$20 000—in other words the member takes out, in nominal share capital, the amount which he wishes to borrow for home-building. In effect, the member is contributing to a sinking fund for the liquidation of his loan. The terminating societies are termed 'co-operative'.

The maximum limit of an individual loan has been increased progressively from \$8 000 (prior to August 1969) to \$25 000 (from July 1978). Societies registered prior to 1 July 1978 were bound by previous limits; societies registered after 1 July 1978 may advance up to \$25 000 to each borrower.



The following table summarises the transactions of the co-operative housing societies operating in Tasmania:

Co-operative Housing Societies, Tasmania (a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
	no.	no.	no.	no.	no.	no.
Operative societies .....	112	116	120	124	126	135
Shareholders .....	2 259	2 504	2 671	n.a.	n.a.	n.a.
Income—	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Interest on Loans .....	677	811	n.a.	994	1 061	1 096
Other interest income .....	11	13	n.a.	16	17	16
Other income .....	136	197	n.a.	185	159	163
Total .....	823	1 021	n.a.	1 195	1 236	1 275
Expenditure—						
Interest paid .....	595	716	n.a.	1 001	1 035	1 070
Management expenses .....	92	120	n.a.	110	115	116
Other expenses .....	39	29	n.a.	32	32	33
Total .....	727	865	n.a.	1 143	1 182	1 219
Liabilities—						
Share subscriptions .....	1 257	1 379	2 554	(b) 375	(b) 424	(b) 396
Reserves .....	698	876				
Loans due to—Government .....	8 297	10 960	12 250	12 934	13 684	13 917
Other lenders (c) .....	2 481	2 428	2 321	2 250	1 996	1 768
Other .....	185	193				
Total .....	12 917	15 836	17 125	15 654	16 143	16 125
Assets—						
Amount owing on loans .....	12 627	15 522	16 763 (d)	15 238 (d)	15 715	15 725
Other .....	290	314	362	416	429	400
Total .....	12 917	15 836	17 125	15 654	16 143	16 125

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

(b) For societies operating on an actuarial basis, members' subscriptions have been offset against 'Amount owing on loans'.

(c) Includes bank overdrafts for day-to-day running of societies.

(d) Net of members' subscriptions for societies operating on an actuarial basis.

### Co-operative Societies

The next tables summarise the financial transactions of societies registered under Tasmanian law as co-operative industrial societies; excluded are co-operative credit societies which are dealt with in a subsequent section. The activities of co-operative societies include processing of primary products, fish and meat marketing, and wholesaling groceries; profits are distributed among members.

Co-operative Societies, Tasmania (a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
	no.	no.	no.	no.	no.	no.
Societies .....	15	18	20	17	13	13
Shareholders .....	7 186	(b) 5 364	5 851	(c) 2 023	1 612	1 764

## Co-operative Societies, Tasmania (a)—continued

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Sales .....	\$'000 10 638	\$'000 11 523	\$'000 13 424	\$'000 18 987	\$'000 18 438	\$'000 20 746
Less cost of goods sold .....	9 229	9 773	11 148	16 434	16 103	18 179
Trading profit .....	1 409	1 749	2 276	2 552	2 335	2 567
Add non-operating receipts (d) .....	488	293	229	185	166	189
Less expenses—						
Wages and salaries .....	502	681	708	755	923	1 090
Interest .....	117	132	204	93	73	87
Administration .....	307	300	379	327	r 283	270
Other .....	780	1 072	1 358	1 238	1 007	1 188
Net surplus .....	192	-143	-144	325	r 215	121
Dividends paid .....	71	104	82	87	84	83

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

(b) Decrease in membership due to one large society going into liquidation during the year.

(c) Decrease in membership due to one large society being incorporated on 30 June 1976.

(d) Commissions, discounts, services, etc.

Co-operative Societies: Assets and Liabilities at End of Year, Tasmania (a)  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Liabilities—</b>						
Paid-up capital .....	1 425	1 516	1 826	744	583	584
Accumulated profits .....	512	285	258	r 629	r 137	176
Reserve funds .....	966	1 042	1 495	r 1 117	r 1 639	1 649
Loans and bank overdraft .....	1 501	2 067	3 342	1 420	1 319	1 376
Sundry creditors .....	1 467	1 359	1 483	1 780	1 692	1 942
Other .....	333	1 359	1 654	1 212	485	757
Total .....	6 203	7 627	10 059	6 902	5 856	6 484
<b>Assets—</b>						
Fixed .....	2 227	2 369	3 629	2 433	2 120	2 222
Stock on hand .....	922	2 176	2 591	1 921	1 515	1 909
Sundry debtors .....	r 1 403	1 141	1 498	1 023	1 001	1 669
Investments and loans .....	1 305	1 256	1 590	565	153	290
Other .....	r 346	684	751	960	1 067	394
Total .....	6 203	7 627	10 059	6 902	5 856	6 484

(a) As there is no uniform accounting period for these societies, details are in respect of the end of accounting periods ending during the years shown.

## Co-operative Credit Societies

The co-operative credit societies (credit unions) are registered under the *Co-operative Industrial Societies Act 1928*. Most credit unions have been established by trade unions (e.g. those serving teachers, hospital employees, etc.) and by church groups. Members contribute capital by taking out shares and making deposits. The aim of the societies is to make loans to members at low rates of interest.

The following table shows the societies' annual transactions:

## Co-operative Credit Societies, Tasmania (a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Operating societies .....	no. 27	no. 23	no. 23	no. r 23	no. 21	no. 19
Shareholders .....	25 508	r 26 058	28 604	r 30 773	r 32 986	37 268

**Co-operative Credit Societies, Tasmania (a)—continued**  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Liabilities (at end of period)—</b>						
Paid-up capital .....	217	219	248	282	322	362
Reserves, accumulated profits .....	24	17	271	613	977	1 308
Deposits .....	12 161	(b) 14 813	18 655	24 692	33 919	46 884
Other .....	549	317	695	746	999	1 998
<b>Total .....</b>	<b>12 952</b>	<b>15 366</b>	<b>19 869</b>	<b>26 333</b>	<b>36 217</b>	<b>50 552</b>
<b>Assets (at end of period)—</b>						
Loans .....	11 868	(b) 13 878	18 039	24 013	30 829	43 939
Cash and current deposits .....	285	586	1 018	1 449	} 5 388	4 613
Other (c) .....	800	902	811	871		2 000
<b>Total .....</b>	<b>12 952</b>	<b>15 366</b>	<b>19 869</b>	<b>26 333</b>	<b>36 217</b>	<b>50 552</b>

(a) As there is no uniform accounting period for these societies, financial details are in respect of accounting years ending during the years shown; details relating to the number of shareholders, etc. are in respect of numbers at the end of accounting period ending during the years shown.

(b) Does not reconcile with data for previous year due to changed collection method.

(c) Includes investments and fixed assets.

### Pension and Superannuation Schemes

#### *Private Schemes*

Surveys on an Australia-wide basis have revealed superannuation and/or retiring allowance schemes for employees in the private sector as follows: (i) schemes operated through life insurance offices, friendly societies and other organisations such as unit trusts; (ii) superannuation, pension and retiring allowance funds constituted by businesses; and (iii) direct payments of pensions and/or retiring allowances by the employer. No details have been released for individual states. Australian data are published in the Bureau's bulletin 'Survey of Selected Private Pension Funds'.

#### *Government, Local Government and Semi-Government Schemes*

The levels of government operating in Tasmania are: (i) federal; (ii) state; (iii) local authority; and (iv) semi-government authority. In the section that follows, any pension or superannuation scheme affecting employees of the Federal Government or its instrumentalities is excluded.

Government superannuation and pension schemes are included as part of 'Private Finance' because the funds involved do not belong to any government but are actually trust moneys held on behalf of contributors. Employees of the State Government contribute to separately constituted funds to which the State Government also makes contributions. Employees of local government and semi-government authorities are covered either by separately constituted funds or by schemes operated through life insurance offices.

The first pension and gratuity scheme for State public servants, introduced in 1860, was non-contributory and short-lived, being repealed in 1863. A contributory provident fund was established under the *Civil Service Act 1900* but this scheme was also short-lived and made way for a contributory but State-subsidised scheme established under the *Public Service Superannuation Fund Act 1905*; a year earlier, a distinct fund had been established with similar principles to serve the teaching service. The *Superannuation Act 1938* established a new fund to serve both public servants and teachers but some pensions continued to be paid from the two funds established in 1904 and 1905. It was not until 1 July 1968 that the residual assets and pension liabilities of these older funds were transferred to the State Superannuation Fund Board. The Assets transferred from the 1904 teachers' fund were \$52 990 and from the 1905 public servants' fund, \$17 103.

*State Superannuation Scheme 1971:* In December 1970, the *Superannuation Act 1938* was amended to provide for adjustments to pensions in accordance with movements in the Consumer Price Index. Next, a new scheme was embodied in the *Retirement Benefits Act 1970*, the date of operation being fixed at 1 July 1971. Contributors to the 'old' scheme were given the right of election, i.e. to change to the 'new' scheme or to stay with the 'old'.

The adoption of fixed percentage contributions as the basis for the new scheme overcame the main difficulty with the more traditional type of scheme, namely the prohibitive cost of new units for contributors in the upper age brackets. The other improvement was the provision for automatic adjustment of the pension in accordance with annual Consumer Price Index movements.

*Separately Constituted Funds:* In the table that follows, the operations of the following schemes have been combined and summarised: (i) State Superannuation Fund; (ii) State Retirement Benefits Fund; (iii) Police Provident Fund; (iv) Metropolitan Transport Trust—Retiring Allowance and Staff Pension Funds; (v) Marine Boards' independent schemes; (vi) University of Tasmania—Non-Assurance Subscribers' Accumulation and Additional Benefits Funds; (vii) Hobart Corporation Retiring Allowance Funds; (viii) Milk Board of Tasmania Superannuation Fund; (ix) Miners' Pension Fund; and (x) State Parliamentary Superannuation Scheme.

**State, Local Government and Semi-Government Pension and Superannuation Schemes Operated Through Separately Constituted Funds, Tasmania (a)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—						
Contributions—						
Employees .....	5 033	7 065	8 416	9 700	10 563	11 444
Employing authorities .....	4 274	5 324	6 778	8 779	10 665	14 104
Interest, dividends and rent .....	3 000	3 949	5 053	6 033	7 720	9 217
Other income .....	497	612	597	2 168	2 133	624
Total .....	12 805	16 949	20 845	26 680	31 081	35 389
Expenditure—						
Pensions .....	5 128	6 263	8 154	10 410	13 108	15 240
Lump sum payments—						
On retirement or death .....	824	1 202	1 262	1 700	1 542	1 657
On resignation or dismissal .....	738	554	1 057	1 331	1 821	1 706
Other expenditure .....	51	277	660	326	367	345
Total .....	6 742	8 297	11 133	13 768	16 838	18 948
Total assets at end of year .....	48 468	57 324	67 007	79 915	94 275	110 421
	no.	no.	no.	no.	no.	no.
Funds in operation .....	14	14	14	13	13	12
Contributors .....	15 814	18 474	17 103	17 893	18 194	18 386
Number of pensioners .....	3 411	3 563	3 712	3 909	3 972	4 156

(a) As there is no uniform accounting period for these funds, financial details are in respect of accounting years ending during the years shown; details relating to the number of contributors, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

In the previous table, the principal funds included are the State Superannuation Fund and the Retirement Benefits Fund contributed to by all permanent full-time employees of the Public Service, Teaching Service, Transport Commission, Hydro-Electric Commission, Metropolitan Transport Trust, all hospitals subsidised by the State Government, and certain police officers (see notes on Police Provident Fund for details). The following table gives principal details of these two funds:

## State Superannuation Fund and Retirement Benefits Fund, Tasmania

Particulars at 30 June	Number of contributors	Number of pensioners		Accumulated funds (a) (\$'000)
		Ex-employees	Widows and children	
STATE SUPERANNUATION FUND				
1974.....	5 674	1 604	1 180	22 767
1975.....	3 922	1 626	1 165	25 318
1976.....	3 616	1 608	1 167	27 733
1977.....	3 347	1 588	1 190	25 772
1978.....	3 048	1 615	1 167	28 233
1979.....	2 753	1 601	1 188	30 874
RETIREMENT BENEFITS FUND				
1974.....	8 560	329	88	19 110
1975.....	11 092	429	121	24 457
1976.....	11 919	569	151	31 355
1977.....	13 016	724	190	44 817
1978.....	13 834	754	213	55 073
1979.....	14 122	881	232	67 311

(a) Total assets less liabilities.

**Police Provident Fund:** The Police Provident Fund, a *closed fund* included in an earlier table, had accumulated funds of \$5 950 888 at 30 June 1979. An amendment to the *Superannuation Act 1938*, in 1963, provided that police officers appointed after 31 December 1963 were required to become contributors to the now closed State Superannuation Fund. Police officers appointed prior to 1 January 1964 could continue as contributors to the Police Provident Fund or exercise an option to become contributors to the State Superannuation Fund. Police officers appointed on or after 1 July 1971 contribute to the Retirement Benefits Fund.

**Schemes Operated Through Life Insurance Offices:** A number of local government and semi-government authorities in Tasmania operate pension and superannuation schemes for their employees through life insurance offices. The next table combines and summarises the operations of such schemes. The following are the main authorities concerned: (i) Semi-government—marine boards, fire brigades, Metropolitan Transport Trust (Launceston and Burnie), University of Tasmania, ambulance boards, Society for Blind and Deaf, Museum and Art Gallery, Botanical Gardens; and (ii) Local government—the cities and municipalities. Some authorities, e.g. University, Metropolitan Transport Trust, etc., operate schemes on both bases, i.e., some through separately constituted funds, and others through life insurance offices.

## Local and Semi-Government Pension and Superannuation Schemes Operated Through Life Insurance Offices, Tasmania (a)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Income—						
Contributions—						
Employees.....	914	1 168	1 508	1 803	r 2 183	2 385
Employing authorities.....	1 523	1 906	2 446	2 982	r 3 402	3 796
Surrenders.....	237	397	362	326	363	394
Death claims.....	156	174	200	431	155	369
Matured policies.....	521	511	608	1 224	844	1 379
Other income.....	155	166	254	339	144	742
Total.....	3 507	4 322	5 378	7 104	r 7 089	9 066

**Local and Semi-Government Pension and Superannuation Schemes Operated Through Life Insurance Offices,  
Tasmania (a)—continued  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
<b>Expenditure—</b>						
Premiums paid to insurance companies .....	2 192	2 734	3 469	4 295	r 4 933	5 488
<b>Benefits—</b>						
On death or retirement .....	678	813	1 049	1 980	1 152	2 329
On resignation or dismissal .....	235	399	268	338	465	438
Other expenditure .....	10	24	36	35	211	634
<b>Total .....</b>	<b>3 115</b>	<b>3 970</b>	<b>4 823</b>	<b>6 649</b>	<b>r 6 760</b>	<b>8 889</b>
<b>Funds in operation .....</b>	<b>no.</b>	<b>no.</b>	<b>no.</b>	<b>no.</b>	<b>no.</b>	<b>no.</b>
Contributors .....	22	22	20	20	r 22	23
	3 061	3 233	3 451	3 549	3 592	3 709

(a) As there is no uniform accounting period for these schemes, financial details are in respect of accounting years ending during the years shown; details relating to the number of contributors, etc. are in respect of numbers at the end of accounting periods ending during the years shown.

### *The Parliamentary Pension and Superannuation Scheme*

The *Parliamentary Retiring Allowances Act 1955* was repealed and replaced by the *Parliamentary Superannuation Act 1973*, effective from 1 July 1973.

The previous scheme was purely contributive. It provided for a full basic rate pension for members who retired, or were defeated, after a minimum qualifying period of 15 years. Lesser rate pensions were calculated pro-rata to the length of service expressed as a fraction of 15 years; for service less than eight years, a member received only a refund of his contributions. The pension applicable was an amount equal to \$12.50 weekly, plus 34.5 per cent of Australian average weekly earnings per employed male unit (see Chapter 17 for details) in each year ended March.

### *Parliamentary Superannuation Act 1973*

Administration of the Fund, established under the Act, is vested in the Parliamentary Superannuation Trust which consists of the President of the Legislative Council, the Speaker of the House of Assembly and the Under-Treasurer. Contribution to the Fund is compulsory and is payable at the rate of 12 per cent of the member's parliamentary salary.

The annual rate of pension is calculated as a proportion of basic salary (see the section 'Salaries of Members of Parliament' in Chapter 3), multiplied by the ratio of the total parliamentary salary (excluding allowances) received during the period of service, to the total basic salary payable in respect of that period. The proportion of basic salary used in the calculation varies with the length of service (from 41.2 per cent for eight years service to 70.0 per cent for 20 years or more service). Members who retire or resign with less than eight years service are only entitled to a refund of their contributions.

**Pension Entitlement:** A member is entitled to a pension in the following circumstances:

- (i) if he ceases to be a member, for any reason, after 15 years service; or
- (ii) he has been a member for eight years or more but less than 15 years and resigns for reasons which the Trust certifies to be 'good and sufficient'; or
- (iii) he has been a member for eight years or more but less than 15 years, his term of office expires and he fails to be re-elected for one of several reasons specified in the Act; or
- (iv) he is forced to retire for medical reasons (under these circumstances a member with less than eight years service may be entitled to a pension calculated as though he had served for eight years).

These general provisions of contributions and rate of pension may be varied in cases where the Trust sees fit and which are in accordance with the Act. Any appeal against a decision of the Trust is heard by the Supreme Court of Tasmania.

The next table gives details relating to the State Parliamentary Superannuation Scheme for recent years:

**State Parliamentary Superannuation Scheme, Tasmania**  
(\$'000)

Particulars	1973-74 (a)	1974-75	1975-76	1976-77	1977-78	1978-79
Income—						
Contributions—Members .....	86	97	127	145	158	172
Government .....	140	200	301	(b) 1 109	1 181	1 645
Total .....	227	297	428	1 253	1 339	1 817
Expenditure—						
Pension payments .....	216	295	423	558	708	748
Other .....	7	3	1	30	1	1
Total .....	224	299	424	588	709	749
Assets at end of year—						
Cash .....	6	6	6	672	669	887
Other .....	—	—	—	—	650	1 508
Total .....	6	6	6	672	1 319	2 394
Liabilities .....	2	4	—	—	—	23 502
Accumulated funds .....	3	2	6	672	1 302	2 371
Contributors at end of year .....	no. 54	no. 54	no. 54	no. 54	no. 54	no. 54
Pensioners at end of year .....	33	39	40	48	50	51

(a) New scheme introduced. See explanatory notes preceding table.

(b) Increase due to transfer of additional funds from Consolidated Revenue on the recommendation of the Actuary, to ensure solvency of the scheme.

### Real Estate Transactions

#### *Title to Land*

When acquiring land today, the buyer needs to know whether the documents are under the 'old system' or the 'new system'. The new system dates from the *Real Property Act* 1862 when Tasmania introduced an adaptation of the Torrens system (Sir Robert Torrens' Real Property Act became law in S.A. in 1858). The Torrens system provides that the matter of title to land shall be a government responsibility. Each piece of separately-owned land is represented by a certificate of title which, with a few minor exceptions, is guaranteed by the State; in Tasmania, the issue and registration of titles is the work of the Lands Titles Office. A statutory assurance fund is maintained to indemnify owners against loss through error.

Land alienated before 1862 was not subject to the provisions of the *Real Property Act* and transactions involving such land are still being recorded under the *Registration of Deeds Act* (the first Tasmanian Deeds Act was made in 1827); this is the old 'system', involving complicated conveyancing, searching, etc. The conveyance is merely evidence of ownership as between the parties to the agreement and lacks the element of conclusive proof inherent in the new system under which the Torrens certificate of title proclaims 'that the person mentioned in it is owner of the land there-in described as against all the world'. Put another way, land passing from A to B, and then to C under the old system requires a search to ascertain the validity of B's ownership and then A's ownership; under the new system, C's certificate of title is adequate proof without any reference to A and B.

The dual system persists to this day but the *Local Government (Registered Titles) Act* 1966 provided that all new sub-divisions of land should be brought under the *Real Property Act* without charge. Fees on voluntary applications to bring land under the *Real Property Act* have also been abolished to encourage other owners to change to the Torrens system.

#### *Property Sales and Mortgages*

Sales of real estate and mortgages on the security of real estate, involve either certificates of title, under the new system, or deeds, conveyances, etc. under the old system. In the following table, sales and mortgages, recorded both under the *Real Property Act* and the *Registration of Deeds Act*, are combined to give a single series showing real estate transactions in Tasmania for recent years:

## Real Estate Transactions, Tasmania (a)

Year	Property sales		Mortgages			
	Number	Total consideration	Registered		Discharged	
			Number	Amount	Number	Amount
		\$'000		\$'000		\$'000
1974-75 .....	14 716	188 436	11 759	120 491	10 127	61 366
1975-76 .....	16 493	289 091	14 323	216 468	11 237	67 872
1976-77 .....	16 319	301 839	14 989	217 298	11 229	77 903
1977-78 .....	14 161	259 367	13 899	228 525	9 894	78 912
1978-79 .....	14 913	314 206	15 384	297 975	11 047	134 220
1979-80 .....	15 532	375 184	15 234	335 886	11 745	179 252

(a) Registered under the *Real Property Act* and *Registration of Deeds Act*.

### The Sydney Futures Exchange: Its Commercial Use as a Form of Price Insurance by Tasmanian Primary Producers

In May 1960, a century after dealing in commodity futures had been established in Chicago, U.S.A., a Greasy Wool Futures market commenced in Sydney. Live cattle contracts were added to wool in 1975. In 1977 a Micron Wool contract replaced the original Greasy Wool Contract. Gold, fresh frozen export boneless beef, bills of exchange (for which the uncertain element is the future interest rate) and the future values in \$Aust. of overseas currencies (\$US, Japanese Yen, £stg) have further extended the range of standardised marketable items. As confidence grows in this Exchange and its Clearing House, the limit to the inclusion of a wider range of storable commodities is the requirement that they be traded in a large free market—one in which volatile spot prices are determined without secrecy through bargaining between many buyers and sellers. Thus, neither iron ore nor bauxite qualify at present.

Tasmanian farmers were at first apprehensive about using the futures markets as hedges against a price drop for their product. Suspicious of the supposedly parasitic activity of all 'middlemen', they were not easily convinced that speculators, harnessed and disciplined by the rules of the Sydney Futures Exchange to give the market volume and depth, could be used to cover them against the risk of a price fall. Despite contrary experience overseas, it is still often the farmer's conventional belief that speculators, by techniques like cornering the market, only amplify price movements.

That this attitude is changing was evident when an Associate Member firm of the Exchange opened an office in Hobart in 1979. In addition to catering for local speculators in gold, etc., it and other agents now deal with a small and growing number of primary producers.

In November 1980, the Federal Treasurer, Mr Howard, acceded to a long standing request from the National Farmers Federation and its predecessors. He announced that losses incurred through *bona fide* hedging on the Sydney Futures Exchange against primary product price movements would, for income tax purposes, be treated as legitimate expenses which could be written off against farm profits. Conversely, profits from futures trading may be averaged over a number of years as can other rural income.

Farmers, who prior to this announcement were being actively advised by stock and station agents or their bankers to 'sell short' (i.e. to sell futures contracts to be bought back later) in order to minimise their risks, now have an additional financial inducement. The simplest way of illustrating how this works is with an example:

#### Example

A grazier, Smith, is advised by his bank manager to reduce his business risk of a price drop for wool by the time his clip is available for sale, by paralleling his normal October wool sale in Hobart with an off-setting 12 or 14 months forward sale and later purchase back, of 10 futures contracts in the standard commodity—22 micron quality fleece wool. Neither the bank manager nor Smith wish to experience difficulties with Smith's overdraft which might be caused by an unexpected drop in world prices for wool. Smith opts for the safer but potentially less profitable 14 month contracts to cover the possibility of a delay in the sale of his wool.



Smith produces a whole range of wool but majors on fine Polwarth. He has no intention to deliver the wool which he contracts to sell in 14 months time. Nevertheless, it was comforting to know that he could do so in December if futures and auction prices plus delivery costs were too far out of line in October 1981. Immediately following the auction of his clip he plans to engage in the paper transaction of buying back 10 identical contracts at the then market price. With this latter transaction the Clearing House would cancel out his original promise to sell.

Ideally, Smith would have preferred to have signed a 'forward' contract of sale with some overseas manufacturer who guaranteed to take his whole clip at an acceptable price. Arrangements like this are rare because they require a community of interest between buyer and seller not only on quantity, but also on price and quality, plus a willingness by the buyer to allow for the vagaries of the growing season, bush fires, disease, etc.

The impracticability of such an ideal arrangement under which he would *have* to make delivery obliges Smith to resort to trade in futures contracts for a standard quantity and quality upon which he has *no intention to make physical delivery*. He is confident that the 22 micron wool price will move in sympathy with his own product.

In brief, Smith's insurance against a price fall might work out as follows:

In October 1980 the contract price for the standard 22 micron wool with delivery 14 months ahead exceeded the current spot market price. When this futures price was adjusted by the difference in premium between 22 micron and the weighted average of Smith's wool type, also by his estimated inflation factor of 10 per cent, and for brokerage charges, he could still forecast an increased profit. So he placed a selling order for 10 contracts through an Associate Member to a Floor Member, who concluded the following sale:

*October 1980: Futures Sold*

Ten Wool Futures contracts sold for delivery in December 1981 at 510c/kg or \$7 650 per 1 500 kg unit (a total of about 150 bales of wool with a value of \$76 500) upon which is payable:

Deposit of \$300/unit which increases by a 'margin' should prices later turn against Smith (i.e. increase). This amount remains the client's and will be refunded if there is a profit after buy back . . . . .	\$3 000
Selling (and later buy back) commission of \$40/contract . . . . .	\$400
Clearing House charge of \$5.40/contract . . . . .	\$54

Total (which may be covered by a written guarantee by the bank manager but against which an Associate Member will charge interest) . . . . .

\$3 454

*October 1981: Offsetting Futures Purchase*

A few weeks before Smith's clip was to be physically auctioned in Hobart, market prices tumbled to 450c/kg. This had in turn been reflected in the market for futures contracts that were approaching delivery date. These usually exceed market prices by 'delivery costs' which involve appraisal by the Futures Exchange agent in Hobart should delivery be effected—in this case, 12c/kg.

While 14 month contracts allow for late shearing or industrial stoppages, sale of such contracts at 12 months often means sacrificing some profit because of the length of time still to run to delivery date. In this case a price of 13c/kg less could have been secured had Smith been prepared to risk the tighter scheduling of 12 month contracts.

The day after the physical auction of his wool at the lower prices, Smith bought an off-setting 10 futures contracts to match the December maturity date on this selling contract of a year earlier, at a price of 475c/kg.

His profit on his futures trading hedge was as follows:

Value of selling contract . . . . .	\$76 500
Less cost of offsetting buying contract . . . . .	\$71 250

\$5 250

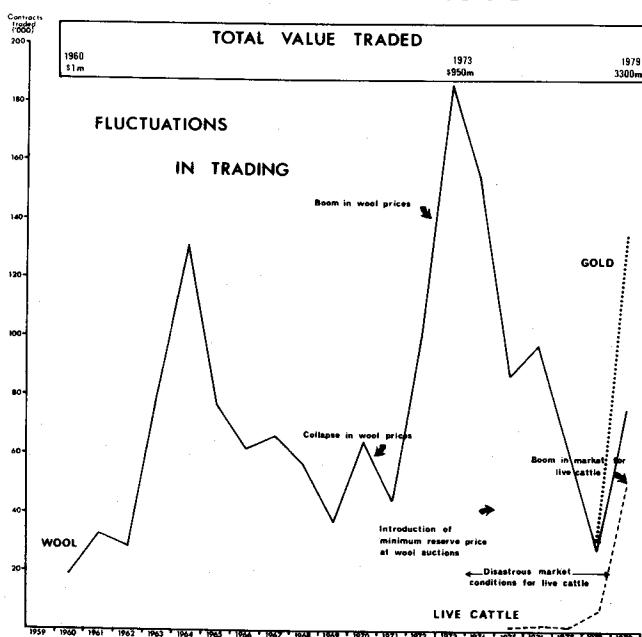
Less commission and Clearing House charges . . . . .

\$454

Net profit . . . . .

\$4 796

## FUTURES CONTRACTS



This profit paid to Smith by his broker soon after his wool sale was like an insurance payout which, by subsidising his low auction receipts, permitted him a profitable year in otherwise adverse circumstances. Of course, if prices had risen significantly from October 1980 to October 1981, Smith's futures trading would have incurred a significant net loss. This would then, however, have been offset by the higher price obtained for his own wool clip.

For the bank manager, the operation has some similarity to a number of insurance schemes which guarantee the repayment of loans under various specified conditions, e.g. housing mortgage loan insurance or export payments insurance. This allows him to lend more with greater security.

The Sydney Futures Exchange Ltd. is involved in education about the working of its markets and has assisted in the compilation of this article. Readers requiring further detail should consult with a Member's Tasmanian agency or an Associate Member.

A Reference: S. Calder, P. Lindsay, D. Koch, *Futures Stock*, Horwitz, Melbourne, 1980.

### Further References

*ABS Publications Produced by the Tasmanian Office*

Private Finance, Tasmania (5601-6) (annual, 1976-77, 1977, 1978 issue released 1/10/79. 7 pp, double issue released 22/5/79, 20 pp.)

Friendly Societies, Report on, Tasmania (5603-6) (annual.)

*ABS Publications Produced by the Canberra Office*

Savings Banks (Preliminary) (5602-0) (monthly, August 1980 issue released 14/10/80, 2 pp.)

Banking (5605-0) (monthly, June) (quarterly, June 1980 released 29/10/80, 23 pp.)

Housing Finance For Owner Occupation, Savings Banks and Trading Banks (5608-0) (monthly, July 1980 released 22/9/80, 6 pp.)

Housing Finance For Owner Occupation, Permanent Building Societies (5610-0) (monthly, August 1980 released 8/10/80, 6 pp.)

Credit Unions: Assets, Liabilities, Income and Expenditure (5618-0) (annual, 1978-79 released 10/4/80, 8 pp.)

General Insurance (5620-0) (annual, 1977-78 released 30/10/79, 6 pp.)

Life Insurance (5621-0) (monthly, May 1980 released 25/8/80, 8 pp.)

Life Insurance (5622-0) (annual, 1978 released 3/10/80, 30 pp.)

Instalment Credit for Retail Sales (5631-0) (monthly, July 1980 released 8/10/80, 5 pp.)

## Chapter 13

### HOUSING AND CONSTRUCTION

#### DWELLING STATISTICS

##### The 1976 Census and Intercensal Estimates

Information concerning the housing of the State's population is obtained from householders' schedules collected during population censuses. Statistics on dwellings derived from the 1976 Census of Population and Housing are included in the 1979 *Year Book* (pp. 349, 350). Details are included on: number of dwellings and occupants; occupied private dwellings by nature of occupancy, by structure and by power or fuel usage; and occupied dwellings by type of outer wall material. For Census purposes, dwellings are divided into two groups, occupied dwellings and unoccupied dwellings. These are defined below:

#### *Definitions*

*Occupied Dwelling:* An *occupied dwelling* is defined as the premises occupied by a household on Census night (for a definition of *household* see below). Occupied dwellings are further classified into the following two categories:

(i) A *private dwelling* is normally a house, room or flat but it can also be a tent, houseboat, or a caravan if standing on its own block of land, and not occupied by members of the same household resident in an adjacent dwelling. It is important to note that the total number of dwellings may be more than the total number of known structures in any given area.

(ii) *Non-private dwellings* are hotels, motels, hostels, boarding houses, gaols, religious and charitable institutions, defence establishments and other communal dwellings. Usually, occupants of such dwellings use communal facilities such as hotel dining-rooms or mess halls. A caravan in a caravan park (whether there permanently or temporarily) is treated as part of a non-private dwelling, as are self-contained units provided by commercial enterprises such as hotels, motels or guest-houses.

*Unoccupied Dwelling:* An *unoccupied dwelling* is a structure built specifically for living purposes and capable of being lived in, but unoccupied at the time of the Census. Vacant houses, holiday houses, huts, cabins (other than seasonal workers' quarters) and houseboats are therefore counted as unoccupied dwellings; but vacant tents, garages and caravans (if not normally occupied) are not. Only private dwellings can be classified as unoccupied. Unoccupied dwellings include dwellings vacant because they have been newly completed, vacant for demolition or repair, holiday homes, dwellings to let, and dwellings where the household was absent on Census night.

*Household:* For Census purposes, a *household* is a group of people who live together as a single domestic unit and eat together, the food eaten by members being served from a common supply. A person living alone is also a household. It is possible, then, for more than one household to live in one house or structure. For example, a lodger who lives with a family and provides all his food for himself is not a member of the family's household but constitutes a separate household and therefore completes a separate Householder's Schedule.

*Intercensal Dwelling Estimates*

It is not possible to prepare a detailed analysis of private dwellings between censuses but intercensal estimates of the number of houses and other dwellings by local government areas are prepared. The base for these estimates is the total number of occupied and unoccupied private dwellings as recorded at the preceding census. The census figures are then adjusted for: (i) demolitions, destructions by fire, conversions and transfers of houses and other dwellings; and (ii) completions of new houses and other dwellings. The transfer of houses between local government areas is merely a redistribution and does not affect the total number of houses for the State. Information about demolitions, conversions and transfers is obtained from local government authorities and the Hydro-Electric Commission. The number of new houses and other dwellings completed is available from the quarterly building construction collection conducted by the Bureau.

The following table, showing the distribution of occupied and unoccupied private dwellings at 30 June 1976, and estimated total dwellings at 30 June 1978 and 1979, differs from the results of the 1976 Population Census in that non-self-contained and improvised dwellings have been excluded:

Number of Occupied and Unoccupied Private Dwellings (a) at 30 June

Local government area (statistical division and sub-division in bold type)	1976 Census			Estimated	
	Occupied	Unoccupied	Total	1978	1979
Hobart (H) .....	17 022	1 270	18 292	18 850	19 042
Glenorchy (H) .....	12 614	578	13 192	13 795	13 976
Clarence (H) .....	11 800	858	12 658	13 462	13 910
Brighton (H) (S) .....	1 312	30	1 342	1 815	2 017
Kingborough (H) (S) .....	4 090	310	4 400	4 999	5 227
New Norfolk (H) (S) .....	2 452	194	2 646	2 729	2 778
Sorell (H) (S) .....	1 384	1 412	2 796	3 023	3 126
Bothwell (S) .....	234	674	908	963	995
Bruny (S) .....	116	298	414	447	452
Esperance (S) .....	928	296	1 224	1 266	1 289
Glamorgan (S) .....	406	466	872	934	956
Green Ponds (S) .....	250	20	270	281	301
Hamilton (S) .....	910	146	1 056	928	863
Huon (S) .....	1 330	108	1 438	1 459	1 503
Oatlands (S) .....	652	142	794	803	810
Port Cygnet (S) .....	590	230	820	873	900
Richmond (S) .....	500	70	570	592	631
Spring Bay (S) .....	530	266	796	827	841
Tasman (S) .....	324	440	764	835	851
<b>HOBART</b> .....	<b>48 952</b>	<b>4 190</b>	<b>53 142</b>	<b>56 397</b>	<b>57 766</b>
<b>SOUTHERN</b> .....	<b>8 492</b>	<b>3 618</b>	<b>12 110</b>	<b>12 484</b>	<b>12 702</b>
Launceston .....	11 008	860	11 868	12 065	12 145
Beaconsfield .....	3 666	706	4 372	4 646	4 780
Deloraine .....	1 422	206	1 628	1 688	1 709
Evandale .....	450	66	516	553	573
George Town .....	1 716	538	2 254	2 441	2 475
Lilydale .....	2 362	96	2 458	2 586	2 640
Longford .....	1 596	138	1 734	1 819	1 882
St. Leonards .....	5 174	260	5 434	5 833	6 078
Westbury .....	1 622	122	1 744	1 892	1 970
<b>Tamar</b> .....	<b>29 016</b>	<b>2 992</b>	<b>32 008</b>	<b>33 523</b>	<b>34 252</b>
Campbell Town .....	480	102	582	587	585
Fingal .....	874	278	1 152	1 174	1 184
Flinders .....	286	76	362	381	392
Portland .....	518	614	1 132	1 227	1 290
Ringarooma .....	694	146	840	852	859
Ross .....	166	74	240	241	242
Scottsdale .....	1 186	330	1 516	1 618	1 651
<b>North Eastern</b> .....	<b>4 204</b>	<b>1 620</b>	<b>5 824</b>	<b>6 080</b>	<b>6 203</b>
<b>NORTHERN</b> .....	<b>33 220</b>	<b>4 612</b>	<b>37 832</b>	<b>39 603</b>	<b>40 455</b>

Number of Occupied and Unoccupied Private Dwellings (a) at 30 June—continued

Local government area (statistical division and sub-division in bold type)	1976 Census			Estimated	
	Occupied	Unoccupied	Total	1978	1979
Burnie .....	5 670	316	5 986	6 344	6 530
Circular Head .....	2 110	422	2 532	2 614	2 649
Devonport .....	6 462	398	6 860	7 414	7 629
Kentish .....	1 126	134	1 260	1 288	1 303
King Island .....	732	112	844	867	877
Latrobe .....	1 528	294	1 822	1 928	1 993
Penguin .....	1 412	108	1 520	1 615	1 644
Ulverstone .....	3 552	294	3 846	4 173	4 284
Wynyard .....	3 174	370	3 544	3 754	3 827
<b>North Western</b> .....	<b>25 766</b>	<b>2 448</b>	<b>28 214</b>	<b>r 29 997</b>	<b>30 736</b>
Gormanston .....	86	34	120	r 109	92
Queenstown .....	1 204	126	1 330	1 319	1 309
Strahan .....	136	112	248	249	252
Waratah .....	468	70	538	561	587
Zeehan .....	1 104	216	1 320	1 558	1 646
<b>Western</b> .....	<b>2 998</b>	<b>558</b>	<b>3 556</b>	<b>3 796</b>	<b>3 886</b>
<b>MERSEY-LYELL</b> .....	<b>28 764</b>	<b>3 006</b>	<b>31 770</b>	<b>33 793</b>	<b>34 622</b>
<b>TASMANIA</b> .....	<b>119 428</b>	<b>15 426</b>	<b>134 854</b>	<b>142 277</b>	<b>145 545</b>

(a) Houses and other self-contained dwellings (flats, home units, etc.); excludes non-self-contained and improvised dwellings.

## BUILDING STATISTICS

### Scope

For statistical purposes, building relates exclusively to the erection of new buildings (including major new additions to existing buildings). Construction work such as the building of railways, bridges, earthworks, water storages, piers, wharves, etc. is excluded. Minor additions, alterations, renovations and repairs to buildings are also excluded because of the difficulty of obtaining lists of persons who undertake this work.

When a dwelling is attached to a new building, the whole unit, both in regard to number and value, is classified according to the type of new building (e.g. a new shop and dwelling is classified simply as a shop). Figures for other dwellings include 'home units' but not conversions of existing buildings into flats. Number of 'other dwellings' refers to the number of new individual dwelling units (e.g. one block of flats containing 10 separate flat units would be counted as 10 dwellings).

Details obtained from government authorities on their construction programs and from building contractors refer to all parts of the State. Details for owner-builders cover only those areas subject to building control by local government authorities; thus some farm buildings are excluded but this does not materially affect the figures.

### Change in Series

Minor changes have been made in the scope and presentation of building statistics from 1973-74. For dwellings, separate figures are now shown for the value of new work, and the value of alterations and additions valued at \$10 000 and over. Previously, data were only published for new work and alterations and additions combined (however, new work and alterations and additions are still combined for 'other building'). Up to 1972-73, alterations and additions valued at \$10 000 and over were classified as new dwelling units, but are *not* counted as dwelling units from 1973-74. Alterations and additions valued at under \$10 000 are excluded from building statistics.

### Source of Data

The main statistics relate to building approvals and to building operations (commencements, completions, etc.). The data are derived as follows:

**Building Approvals:** These comprise: (i) approvals by local government authorities for the construction of private buildings; (ii) contracts let and day labour projects commenced by governmental authorities; and (iii) private buildings reported by contractors to have been commenced in certain areas of the few rural municipalities where building regulations do not apply to the whole municipality. Details are compiled monthly.

**Building Operations:** Returns are obtained from : (i) building contractors engaged in the erection of new buildings; (ii) owner-builders; and (iii) federal, state, local and semi-government authorities. Statistics are compiled at quarterly intervals.

### Definitions

**A Dwelling:** is classified as either a 'House' or an 'Other Dwelling':

- (i) A 'House' is defined as a building which has been designed or adapted so that its prime purpose is to be a single self-contained (i.e. including bathing and cooking facilities) dwelling unit which is completely detached from other buildings, and occupies (except in such cases as dwellings built for employees or families of the owner or lessee of the land) a separate titled block of land.
- (ii) An 'Other Dwelling' is defined as a self-contained structural dwelling unit other than a house as defined in (i) above. These include flats, home units, semi-detached dwellings, villa units, town houses, etc.

**Contract-built:** Includes the operations of all building contractors and government authorities which undertake the erection of new buildings.

**Owner-built:** An 'owner-built' house is one erected by the owner, or under the owner's direction but without the services of a contractor responsible for the whole job.

**Commenced:** A building is regarded as having been commenced when work on the foundations has begun.

**Completed:** A building is regarded as having been completed when the contractor has fulfilled the terms of the contract.

With both 'commencements' and 'completions' there is some difficulty in maintaining a uniform classification since the definition of an exact point of time in building operations is involved.

**Under Construction:** A building is so classified if it is uncompleted at the end of the period whether or not work on it was actively proceeding at that date.

**Value of Building:** approved, commenced, completed, or under construction represents the estimated value of the whole job when completed, *excluding* the value of the land on which the job is carried out.

**Value of Building Work Done:** represents the estimated value of the building work actually carried out during the period.

All values shown are *current values*, i.e. no adjustment has been made for the substantial rise in building costs over recent years. Some perspective to the increases in values can be gained from the wholesale price indexes of materials used in house building and of materials used in building other than house building for Hobart, and from increases in average weekly earnings per employed male unit for Tasmania (see table and graphs appearing later in this Chapter).

### Building Approvals

The following two tables show details of building approvals; a distinction is made between 'private' and 'government' and the information is dissected to give separate figures for statistical divisions. In 1978-79, 44 per cent of the total value of building approvals was attributed to the Hobart Division, six per cent to the Southern Division, 28 per cent to the Northern Division, and 22 per cent to the Mersey-Lyell Division.

## Building Approvals, by Statistical Division, 1978-79

Particulars	Hobart	Southern	Northern	Mersey-Lyell	Total Tasmania
NUMBER					
New dwellings—Private .....	896	360	824	731	2 811
Government .....	471	1	156	205	833
Total .....	1 367	361	980	936	3 644
VALUE (\$'000)					
New dwellings—Private .....	28 907	7 728	24 138	22 735	83 508
Government .....	9 687	40	3 513	4 461	17 700
Alterations and additions to dwellings (a)—Private .....	1 865	261	1 494	1 457	5 077
Government .....	—	—	12	—	12
Other building—Private .....	14 145	1 387	8 753	6 658	30 943
Government .....	26 890	1 140	12 837	5 309	46 176
All building—Private .....	44 917	9 375	34 385	30 850	119 527
Government .....	36 577	1 180	16 362	9 770	63 889
Total .....	81 494	10 555	50 747	40 619	183 416

(a) Valued at \$10 000 and over.

## Building Approvals, Tasmania

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
NUMBER						
New dwellings—Private .....	3 404	2 559	3 673	3 462	2 757	2 811
Government .....	771	800	763	940	932	833
Total .....	4 175	3 359	4 436	4 402	3 689	3 644
VALUE (\$'000)						
New dwellings—Private .....	51 330	48 277	88 100	92 367	78 136	83 508
Government .....	9 238	12 861	13 523	18 159	17 961	17 700
Alterations and additions to dwellings (a)—Private .....	778	1 163	2 295	3 877	4 817	5 077
Government .....	19	—	31	—	—	12
Other building—Private .....	19 878	21 318	25 217	37 474	41 623	30 943
Government .....	19 476	29 115	31 224	48 685	45 192	46 176
All building—Private .....	71 986	70 760	115 612	133 718	124 576	119 527
Government .....	28 733	41 977	44 777	66 844	63 153	63 889
Total .....	100 719	112 736	160 390	200 562	187 729	183 416

(a) Valued at \$10 000 and over.

## Building Construction

## Houses Constructed

The next table shows details of the number and value of houses commenced, completed and under construction for recent years:

## Construction of New Houses, Tasmania

Year	Commenced		Completed		Under construction at end of year	
	Number	Value (a)	Number	Value (a)	Number	Value (a)
		(\$'000)		(\$'000)		(\$'000)
1973-74 .....	3 132	49.5	2 819	41.6	2 003	31.2
1974-75 .....	2 497	49.8	2 650	48.2	1 798	35.0
1975-76 .....	3 078	74.9	2 804	63.3	1 981	49.4
1976-77 .....	2 966	81.0	3 137	84.9	1 778	49.1
1977-78 .....	2 688	77.5	2 833	82.6	1 615	46.0
1978-79 .....	2 889	88.7	2 617	80.7	1 885	59.3

(a) When completed.

**Material of Outer Walls:** The following table shows the number of new houses completed and their classification according to the material used in their outer walls. Until 1963-64, wood was the predominant material used but, since then, brick veneer has become the principal outer wall material for new houses; in 1978-79 brick veneer houses accounted for 78 per cent of all houses completed.

## Number of New Houses Completed, Classified by Material of Outer Walls, Tasmania

Material of outer walls	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Brick, concrete, etc.—						
Solid .....	122	154	144	162	143	154
Veneer .....	2 383	2 173	2 296	2 473	2 277	2 050
Wood (weatherboard, etc.) .....	157	116	112	148	214	219
Asbestos cement .....	126	182	177	199	154	148
Other .....	31	25	75	155	45	46
Total .....	2 819	2 650	2 804	3 137	2 833	2 617

**Government Construction of Houses:** The post-war era was notable for the entry of the State Government into the housing field on a large scale; in November 1945, the Federal Government entered into an agreement with the states whereby it would provide finance for housing projects to be built by the state governments. Under the agreement, Tasmania received \$5 670 000 which it repaid on withdrawing from the scheme in August 1950. The Tasmanian Government nevertheless continued to build houses using the resources available from its own Loan Fund. In 1956, the State Government entered into a new agreement with the Federal Government, an agreement renewed with minor modifications in 1961 and 1966. This method of allocating funds to the states ceased at 30 June 1971. Tasmania's aggregate advances under the scheme to 30 June 1971 were \$89 477 000. For 1971-72 and 1972-73 funds for State housing were provided as part of the State's approved loan raisings (i.e. loans raised for housing were credited to the Loan Fund and expenditure was made from the Loan Fund). However, at the June 1973 Premiers' conference the question of allocation of funds for state housing was again discussed and a Federal-State Housing Agreement was proposed which provided for the states to receive advances for welfare housing during the five years 1973-74 to 1977-78; these advances were in addition to the States' Loan Fund borrowing programs. (In effect the pre-1971-72 situation had been restored.)

The 1973 Housing Agreement expired on 30 June 1978. It was replaced by the *Housing Assistance Act 1978* and a new agreement was entered into between the Commonwealth and the States. The new Agreement covers the three years from 1 July 1978 to 30 June 1981 and supersedes the provisions of all past Agreements where they are in conflict. It also permits the Federal and State Ministers to vary the provisions of the Agreement relating to rental and purchase assistance. Funds will be provided by the Commonwealth for the purpose of the Agreement in each of the three financial years, the actual amount being set by the Commonwealth after discussion with the State Ministers. The Federal Minister will also decide the proportion of the total money to be used for home purchase assistance and rental assistance. The Act also covers special grants for aged persons housing.



The following table shows, for Tasmania, the number of houses completed for recent years, and distinguishes between those built for government authorities (all types) and those built for private persons:

Number of New Houses Completed for Government Authorities and Private Persons, Tasmania

Year	For government authorities	For private persons	Total	Year	For government authorities	For private persons	Total
1973-74 .....	586	2 233	2 819	1976-77 .....	696	2 441	3 137
1974-75 .....	548	2 102	2 650	1977-78 .....	601	2 232	2 833
1975-76 .....	793	2 011	2 804	1978-79 .....	542	2 075	2 617

The principal construction authority in Tasmania is the Housing Division of the State Department of Housing and Construction but 'houses built for government authorities' include construction by, or for, other State and Federal Government departments, instrumentalities, etc.

#### Construction of New Houses and Other New Dwellings

The figures for the more recent years show a high level of new dwellings other than houses (individual units) erected. In 1978-79 'Other new dwellings' comprised 25 per cent of the total number of dwellings completed compared to only twelve per cent in 1968-69.

In the following table, details are given of completions of new houses and other new dwellings for recent years:

New Houses and Other New Dwellings Completed, Tasmania

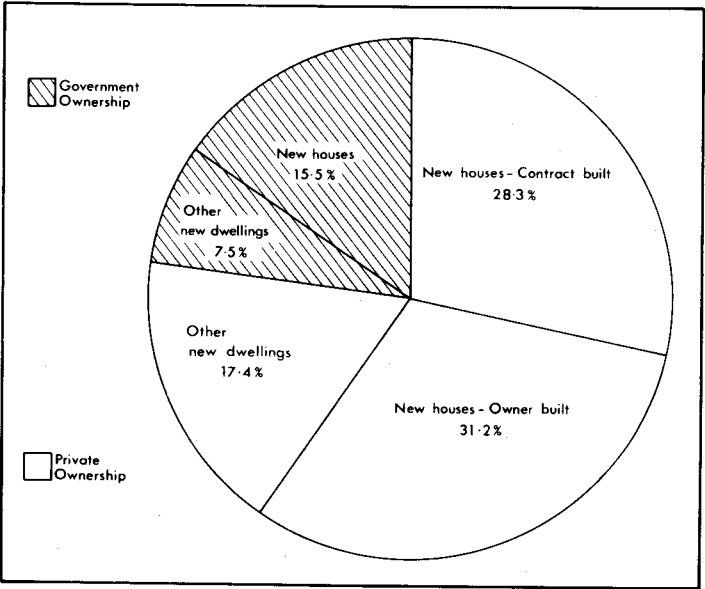
Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
NUMBER						
New houses—						
Government ownership—						
Contract-built .....	290	269	465	327	342	221
Day labour .....	296	279	328	369	259	321
Private ownership—						
Contract-built .....	1 255	1 093	1 001	1 069	973	987
Owner-built .....	978	1 009	1 010	1 372	1 259	1 088
Total houses .....	2 819	2 650	2 804	3 137	2 833	2 617
Other new dwellings (a) .....	700	812	879	902	1 052	875
Total houses and other dwellings	3 519	3 462	3 683	4 039	3 885	3 492
VALUE (\$'000)						
New houses .....	41 634	48 154	63 272	84 877	82 565	80 718
Other new dwellings .....	6 625	10 028	13 858	18 011	23 136	18 742

(a) Individual dwelling units.

The pie chart below shows the number of new houses and other new dwellings completed, dissected by type of ownership, as a proportion of the total number of dwellings completed:

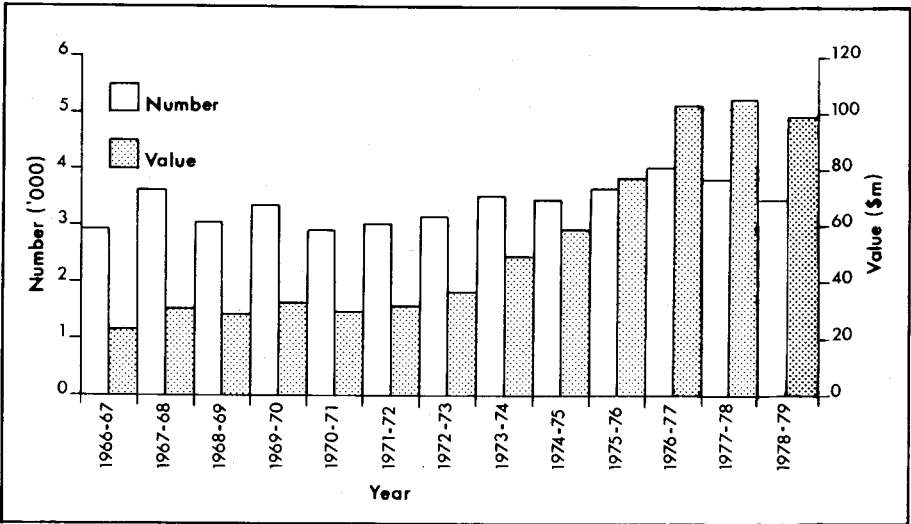
*Housing and Construction*

**New Dwellings Completed, Tasmania, 1978-79**  
(Proportion of Total Number)



The following graph shows the number and value of new dwellings completed from 1968-69 to 1978-79. As noted earlier, all values shown in this section are *current values*. If a series for the value of new dwellings completed adjusted to a constant prices basis (to take account of changes in building construction costs) was available, then, if shown on the graph, it could be expected to follow a trend similar to that shown by the number of dwellings completed.

**New Dwellings Completed (a), Tasmania**



(a) Alterations and additions valued at \$10 000 or more are included to 1972-73 but excluded from 1973-74.

The following table dissects the numbers of dwellings commenced, completed and under construction for 1978-79 by statistical division:

**Number of Dwellings Commenced, Completed and Under Construction, by Statistical Division, 1978-79**

Statistical division or sub-division	Houses			Other dwellings (individual units)			Total number of dwelling units		
	Com-menced	Com-pleted	Under constrn	Com-menced	Com-pleted	Under constrn	Com-menced	Com-pleted	Under constrn
Hobart .....	1 064	1 020	579	343	423	329	1 407	1 443	908
Southern .....	311	260	321	14	40	2	325	300	323
Northern—Tamar .....	668	535	476	223	251	177	891	786	653
North Eastern .....	123	115	104	24	10	24	147	125	128
Total .....	791	650	580	247	261	201	1 038	911	781
Mersey-Lyell—North Western .....	700	668	393	166	131	97	866	799	490
Western .....	23	19	12	20	20	—	43	39	12
Total .....	723	687	405	186	151	97	909	838	502
Total Tasmania	2 889	2 617	1 885	790	875	629	3 679	3 492	2 514

### Construction of All Buildings

The previous tables in this section have been concerned with the construction of new dwellings. The next table shows the value of all building completed according to type; new houses and other new dwellings are included to allow comparison:

**Value of all Building Completed: Classified According to Type, Tasmania (\$'000)**

Type of building	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
New houses .....	41 634	48 154	63 272	84 877	82 565	80 718
Other new dwellings .....	6 625	10 028	13 858	18 011	23 136	18 742
Total new dwellings .....	48 259	58 182	77 130	102 888	105 701	99 460
Alterations and additions to dwellings(a) .....	347	642	1 684	2 272	4 232	4 776
Hotels, etc. ....	4 488	2 256	3 828	3 674	5 528	7 464
Shops .....	3 980	3 156	2 056	6 838	11 979	7 155
Factories .....	3 820	5 670	6 955	5 186	5 875	7 604
Offices .....	8 381	5 721	15 390	7 432	11 652	12 988
Other business premises .....	2 398	4 296	2 736	4 888	4 475	7 001
Education .....	13 209	9 980	22 711	25 297	27 112	13 244
Religion .....	147	825	433	424	1 532	910
Health .....	848	3 120	5 835	5 879	6 354	1 275
Entertainment and recreation .....	1 322	1 700	2 559	3 003	2 593	4 140
Miscellaneous .....	1 747	3 946	3 791	6 779	5 988	8 410
Total other building .....	40 340	40 669	66 295	69 402	83 087	70 192
Total all building .....	88 946	99 493	145 109	174 563	193 019	174 427

(a) Valued at \$10 000 and over.

The following table shows the distribution of the value of buildings completed according to type:

**Value of Building Completed, by Type of Building, 1978-79**  
(\$'000)

Statistical division or sub-division	New houses	Other new dwellings	Alterations and additions to dwellings (a)	Shops	Offices	Education	Other building	Total all building
Hobart .....	33 594	9 533	1 640	3 323	7 529	4 335	16 751	76 705
Southern .....	6 092	705	450	149	14	303	2 518	10 231
Northern—								
Tamar .....	16 592	5 372	1 162	546	3 537	5 807	6 554	39 570
North Eastern .....	2 707	190	178	43	129	875	971	5 094
Total .....	19 299	5 562	1 341	589	3 667	6 682	7 525	44 664
Mersey-Lyell—								
North Western .....	21 316	2 521	1 312	3 078	1 172	1 441	7 806	38 646
Western .....	418	420	32	16	607	483	2 205	4 181
Total .....	21 734	2 942	1 344	3 094	1 779	1 924	10 010	42 827
Total Tasmania ..	80 718	18 742	4 776	7 155	12 988	13 244	36 804	174 427

(a) Valued at \$10 000 and over.

The following table gives details of the total value of all building commenced, completed and under construction for recent years. The items included under 'all building' are specified in the previous two tables.

**Value (When Completed) of All Building, Tasmania**  
(\$m)

Year	Com-menced	Com-pleted	Under construction (a)	Year	Com-menced	Com-pleted	Under construction (a)
1973-74 .....	107.1	88.9	97.4	1976-77 .....	178.6	174.6	153.7
1974-75 .....	113.2	99.5	116.3	1977-78 .....	192.3	193.0	161.3
1975-76 .....	156.8	145.1	140.5	1978-79 .....	211.4	174.4	206.9

(a) At end of period.

#### *Value of Work Done and Changes in Construction Costs*

The *value of building work done* represents the estimated value of the building work actually carried out during the periods shown.

As pointed out in the section 'Definitions' all values shown relating to building jobs are *current values* only; no attempt has been made to adjust values to a constant prices basis which would allow for increases in construction costs over the periods shown. The next table and accompanying graph include details of the relevant wholesale price indexes (for Hobart) and of average weekly earnings per employed male unit for Tasmania, which give some perspective to the trends shown in the building value series. In the semi-logarithmic graph, equal rates of change (compound percentage rates of growth) are represented by lines of the same angle of slope to the horizontal axis. Therefore, this graph enables ready comparison between the respective rates of growth of the value of building work done and the two indexes shown.

## Value of Building Work Done, Tasmania, Wholesale Price Indexes and Average Weekly Earnings

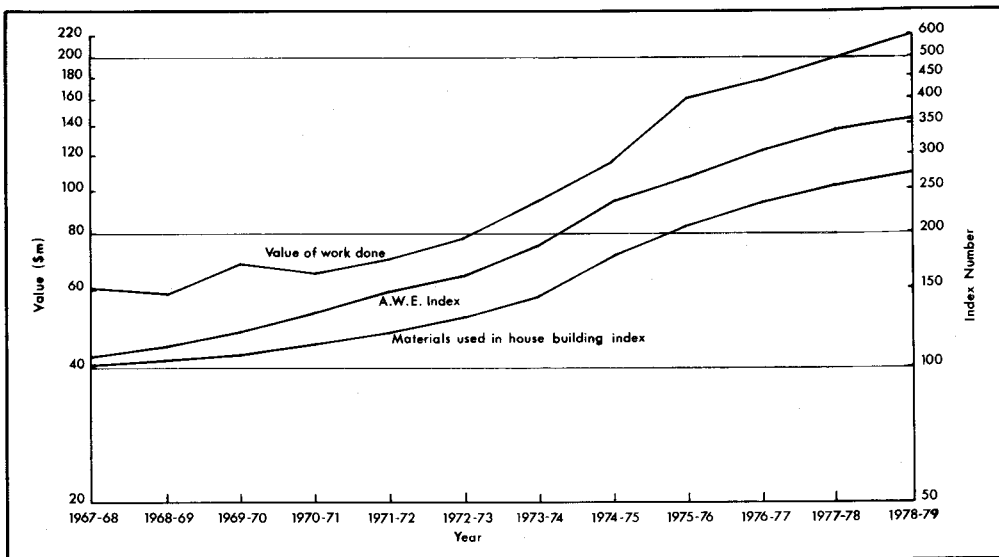
Particulars		1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Value of work done—							
New houses .....	\$'000	46 332	48 757	73 190	85 669	81 487	87 079
Other new dwellings .....	\$'000	8 010	10 046	16 063	20 842	22 501	17 344
Total new dwellings .....	\$'000	54 342	58 803	89 253	106 511	103 988	104 424
Alterations and additions to dwellings .....	\$'000	444	744	1 883	2 407	4 584	5 404
Other building .....	\$'000	41 098	57 433	69 414	68 758	90 009	90 989
Total building .....	\$'000	95 884	116 979	160 551	177 676	198 581	200 816
Percentage increase (a) .....		22.7	22.0	37.2	10.7	11.8	1.1
Wholesale price index (b)—							
Materials used in house building—							
Index number .....		145.5	179.1	209.2	235.1	256.7	273.6
Percentage increase (a) .....		11.2	23.1	16.8	12.4	9.2	6.6
Materials used in building other than house building—							
Index number .....		143.8	179.3	210.4	234.8	253.7	270.5
Percentage increase (a) .....		10.9	24.7	17.3	11.6	8.0	6.6
Average weekly earnings (c)—							
Amount .....	\$	110.50	140.20	157.80	181.20	199.00	211.60
Expressed as index to base 1966-67 = 100.0 (d) .....		188.9	239.7	269.7	309.7	340.2	361.7
Percentage increase (a) .....		16.1	26.9	12.6	14.8	9.8	6.3

(a) Over previous year.

(b) For Hobart, all groups; base of each index: year 1966-67 = 100.0.

(c) Per employed male unit, Tasmania. Includes earnings of salaried employees, overtime earnings, over-award and bonus payments, etc., in addition to wages at award rates.

(d) Average weekly earnings for Tasmania in 1966-67 were \$58.50.

Value of All Building Work Done, Tasmania, Wholesale Price Index of Materials Used in House Building (a) and Average Weekly Earnings Index (b)  
(Semi-logarithmic (Ratio) Scale Graph)

(a) All groups, Hobart; base year 1966-67 = 100.0.

(b) Average weekly earnings per employed male unit for Tasmania adjusted to the base: year 1966-67 = 100.0.

## CONSTRUCTION INDUSTRY STATISTICS

### Construction Industry Survey (Private Sector)

Statistics in this section were compiled from a sample survey of private sector construction establishments in respect of the year 1978-79. This is the first time that the ABS has obtained comprehensive information on the structure of the construction industry.

#### Scope

The scope of the survey included all private sector establishments and ancillary units predominately engaged in construction activities, i.e. those establishments classified to the industries in Division E of the ASIC. The actual range of activities is set out in Volume 1 of the *Australian Standard Industrial Classification (A.S.I.C.) 1978* (Catalogue No. 1201.0).

These statistics relate to the private sector only; the public sector is covered later in this chapter.

#### Establishment

An 'establishment' in the construction industry is defined for statistical purposes as the location at which, or from which, construction activities are managed or controlled on a relatively permanent basis. For convenience such a location is commonly called the 'construction base of operations'. The data collected cover all the activities which are undertaken at or from this location.

#### Precision of the Estimates

As the estimates are derived from returns received from a sample of establishments they may differ from the results which would have been obtained if the collection had been made from all establishments. A measure of the likely difference is given by the standard error for each estimate. There are about two chances in three that a sample estimate will differ from results that would be obtained from a comparable complete collection by less than one standard error, and nineteen chances in twenty that the difference would be less than two standard errors.

Some of the standard errors associated with the estimates are relatively high. Items chosen for inclusion in the following table, unless noted, have standard errors of less than 15 per cent. Users should check that the estimates are reliable enough for the particular purpose for which they require the statistics.

Other definitions and data concepts applying to the integrated economic censuses will be found in the section 'Integrated Economic Censuses' in Chapter 18.

### Survey Results

#### Private Sector Construction Establishments, Selected Items of Data by Industry Class

The table that follows contains a summary of the principal private sector construction statistics by industry class for 1978-79:

Private Sector Construction Establishments by Industry Class, Tasmania, 1978-79

ASIC code (a)	Industry Class	Estab- lishments operating at 30 June	Employment (including working proprietors)— average for whole year			Wages and salaries	Turnover
			Males	Females	Persons		
		No.	No.	No.	No.	\$'000	\$'000
4111	House construction .....	384	1 001	266	1 267	6 683	53 064
4112	Residential building const., nec....	(b) 49	(b) 119	(b) 51	(b) 170	(b) 666	(b) 9 938
4113	Non-residential building const. ....	136	1 681	127	1 808	17 279	95 301
411	Total building construction .....	569	2 801	444	3 245	24 627	158 303
412	Total non-building construction ..	30	354	19	372	3 775	16 773
41	Total general construction .....	599	3 155	463	3 617	28 402	175 077
42	Total special trade construction ..	847	3 390	600	3 990	27 301	107 509
41-42	Total construction .....	1 446	6 545	1 063	7 608	55 703	282 585

## Private Sector Construction Establishments by Industry Class, Tasmania, 1978-79—continued

ASIC code (a)	Industry class	Stocks		Total purchases transfers in and selected expenses	Value added	Fixed capital expenditure less disposals
		Opening	Closing			
		\$'000	\$'000	\$'000	\$'000	\$'000
4111	House construction . . . . .	(b) 5 939	(b) 5 698	37 938	14 885	972
4112	Residential building const., nec. . .	(b) 1 716	(b) 2 663	(b) 7 409	(b) 3 475	(b) 993
4113	Non-residential building const. . . .	5 989	5 343	70 086	24 570	705
411	Total building construction . . . .	13 644	13 704	115 434	42 930	(b) 2 670
412	Total non-building construction . .	534	607	10 136	6 710	1 184
41	Total general construction . . . . .	14 178	14 311	125 570	49 640	(b) 3 854
42	Total special trade construction . .	5 012	4 683	53 784	53 396	2 396
41-42	Total construction . . . . .	19 189	18 994	179 354	103 036	6 249

(a) Australian Standard Industrial Code.

(b) Included for completeness, high standard error (i.e. in excess of 15 per cent).

## Construction Activity in the Public Sector

Separate details were collected in 1978-79 on the construction activities of all public sector enterprises engaged in construction activity to a significant extent (defined as those public sector enterprises with seven or more employees engaged in managing or undertaking construction activities).

The statistics provide some measures of the significance of construction activity undertaken by public sector enterprises using their own workforce.

The public sector construction activity data cannot be validly aggregated with private sector construction establishment data due to differences in the definition of construction units. (For an explanation refer to *Construction Activity in the Public Sector Australia 1978-79* (Cat. No. 8712.0).)

The following table contains a summary of the principal public sector enterprise construction expenditure for 1978-79. Data for Commonwealth Government activity in Tasmania have been excluded from the table.

Public Sector Enterprises—Tasmania  
Details of Construction Expenditure—1978-79

Level of government	Enterprises	Construction employment (total)	Projects involving enterprises' own employees		Projects not involving enterprises' own employees	Total expenditure
			Wages and salaries paid to construction employees	Other selected expenses	Payments to contractors	
	No.	No.	\$'000	\$'000	\$'000	\$'000
Tasmanian State Government	13	2 723	33 608	65 265	84 214	183 087
Local government authorities	32	792	6 381	9 227	6 571	22 180
Other (semi-government) . . . .	1	42	143	87	323	553
Total . . . . .	46	3 557	40 132	74 579	91 108	205 820

## FINANCIAL ASSISTANCE FOR HOUSING

## The State Department of Housing and Construction—Housing Division

*General*

The former Housing Department, now the Housing Division of the State Department of Housing and Construction, was established in July 1953 as a separate authority to administer that portion of the *Homes Act* 1935 which relates to the purchase and development of land for housing, and the erection of homes for rental and sale. Funds for these purposes, up to 30 June 1971, were made available under the Federal-State Housing Agreement; allocations of loan funds under the agreement were: (i) in addition to loan raisings credited to State Loan Fund; and (ii) not part of State public debt. For 1971-72 and 1972-73 loans for State housing were credited to the State Loan Fund and formed part of the public debt. However, for 1973-74 the pre-1971-72 situation was restored when a new Federal-State Housing Agreement became operative. In addition to providing finance for the purchase and development of land and construction of houses, the new Agreement also provides finance for the purchase, upgrading and renovating of existing dwellings and places certain restrictions on the allocation of homes constructed from Agreement funds. On 14 September 1977, the former Housing Department was amalgamated with the Architectural Branch of the former Public Works Department to form the State Department of Housing and Construction. This new Department combines two Divisions—the Housing Division and the Construction Division. The Housing Division has, from the date of amalgamation, taken over the functions of the former State Housing Department. The Housing Division uses both day labour and private contractors and has its own factory for timber storage, milling and joinery manufacture in addition to plumbing and electrical workshops, etc. The dwellings constructed are three-bedroom brick veneer units, roofed with tiles or corrugated iron. Due to the changing nature of housing a greater proportion of flats for elderly persons, multi-unit flats and villa units are now also being constructed.

*Construction of Dwellings*

During 1979-80, 790 dwellings (416 houses, 175 elderly persons' units, 198 villa units, and 1 movable unit) were completed. The following table shows the aggregate of dwelling units constructed since 1944 by the Housing Division of the State Department of Housing and Construction and by earlier State Housing Construction Authorities.

Aggregate of Dwellings Constructed by State Housing Authorities:  
From 1944 to 30 June 1980 (a), Tasmania

Type of dwelling	Bed-sitting room	One bedroom	Two bedrooms	Three bedrooms	Total
Houses (detached and semi-detached) . . .	—	—	659	16 342	17 001
Multi-unit flats . . . . .	1	120	175	20	316
Villa units . . . . .	—	23	632	108	763
Elderly persons' units . . . . .	462	741	—	—	1 203
Movable units . . . . .	29	—	—	—	29
Total dwelling units . . . . .	492	884	1 466	16 470	19 312

(a) Construction to 30 June 1953 was undertaken by the Housing Division of the Agricultural Bank of Tasmania. Subsequent construction was by the Housing Division of the State Department of Housing and Construction (previously the State Housing Department).

*Rental of Dwellings*

As from 1 August 1976, all Housing Division dwellings have been allotted on a rental basis only. Allocations are made in accordance with the income limits for eligibility. An applicant will be eligible for assistance provided the 'bread winner's' gross income does not exceed the Australian average weekly earnings per employed male unit, published quarterly (see Chapter 17). The weekly rental of newly erected three bedroom homes in the Hobart area as at 30 June 1980 was \$40.00. In cases where the occupiers' incomes are insufficient to enable them to meet the full economic rental, rebates may be provided. These are graduated according to the incomes of the occupiers.



### Agricultural Bank of Tasmania—Home Purchase Assistance

The Agricultural Bank of Tasmania is responsible for the administration of funds made under the Home Purchase Assistance Section of the *Housing Assistance Act 1978*. A new Housing Agreement operating from 1 July 1978 consolidated all past agreements. The State has also provided State Loan Funds for lending under the *Homes Act 1935* specifically available for first home builders. Interest rates vary from 6 per cent to 9.5 per cent, depending on need. Repayment terms are normally over 30 years. The new Agreement has the following aims:

- (i) To facilitate home ownership for those able to afford it but not able to gain it through the private market.
- (ii) To provide assistance for home ownership in the most efficient way and thus exclude from eligibility those not in need and minimise continued availability of assistance to those no longer in need. This is to involve provision of assistance that is related to particular recipients' current economic and social circumstances.
- (iii) To enable the states to exercise maximum autonomy and flexibility in the administrative arrangements necessary to achieve (i) and (ii), above.

The following table shows details for recent years:

Agricultural Bank of Tasmania—Advances for Housing (a)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Advances approved—						
Number.....	453	431	393	366	350	281
Value (\$'000).....	6 148	6 100	8 355	8 354	7 532	6 551
Advances outstanding (b) (\$'000).....	30 290	33 481	38 832	43 726	49 187	52 740

(a) Excludes advances to building societies.

(b) At end of period.

The Agricultural Bank also administers the allocation of advances to Co-operative Housing Societies; details of such advances and of the Co-operative Housing Societies appear in Chapter 12, 'Private Finance'.

### Defence Service Homes Corporation

#### General

The Corporation's function is to administer the *Defence Services Homes Act 1918*. This was enacted in order to assist certain former and serving members of the Australian Forces and certain other persons (e.g. widows of eligible persons) to obtain housing with finance made available on a term of up to 45 years at interest rates from 3¼ per cent per annum.

#### Defence Service Homes Loans

In very broad terms, persons eligible for assistance from a Service viewpoint are: (i) members of the defence forces who enlisted for, or had, overseas service; (ii) members or ex-members of the defence forces who have completed at least three years full time continuous service, provided that service did not end before 7 December 1972; and (iii) National Servicemen who completed the period of service for which they were deemed to have been engaged to serve, on or after 7 December 1972. Also, neither the applicant nor his spouse must be the owner of a home at the time of seeking a loan. The following table shows details of Defence Service Homes activities in the provision of finance for Tasmanian housing. Details of additional loans advanced for alterations, etc. to homes already subject to Defence Service Homes finance are not included.

## Defence Service Homes Operations: Homes Financed in Tasmania

Year	Loan applications approved (a)	Homes financed			Expenditure
		Homes purchased (b)	Homes built (c)	Mortgages taken over (d)	
	no.	no.	no.	no.	\$'000
1974-75 .....	256	190	5	54	3 220
1975-76 .....	195	126	17	58	2 795
1976-77 .....	125	70	8	42	1 882
1977-78 .....	126	79	16	32	1 807
1978-79 .....	90	79	6	17	1 447
1979-80 .....	105	80	3	21	1 508

(a) Loan applications *approved* are not necessarily paid out in the same year.

(b) New or existing properties.

(c) Finance made available by Defence Service Homes Corporation during construction.

(d) Pre-arranged mortgages, raised by eligible persons to finance construction of their home, taken over by Defence Service Homes on satisfactory completion of the home.

## Homes Savings Grant Scheme

Under the Federal *Homes Savings Grant Act 1976*, a grant is payable to people who, on or after 1 January 1977, contract to buy or build, or commence to construct, their first home in Australia. Persons who contracted for their first homes during 1977 and 1978 could qualify for grants of up to \$667 and \$1 333, respectively, depending upon their savings. A maximum grant of \$2 000 applies to persons who have entered into their contracts from 1 January 1979. The Government announced that there is a qualifying limit of \$40 000 on the value of the home for persons who have contracted to buy on or after 25 May 1979.

People who acquired their home on or before 31 December 1976 could qualify under the *Homes Savings Grant Act 1964* which provides for the payment of grants to young married couples who acquired homes valued at no more than \$22 500.

The following table gives details for recent years of grants made under the *Homes Savings Grant Act 1976*. Details of grants made under the *Homes Savings Grant Act 1964* for the years 1972-73 to 1977-78 are included in the 1979 *Year Book*, (p. 363).

## Grants Made in Tasmania Under the Homes Savings Grant Act 1976

Year	Number of applications		Value of grants approved (\$'000)
	Received	Approved	
1976-77 .....	434	390	250
1977-78 .....	1 736	1 644	1 270
1978-79 .....	1 844	1 587	1 751
1979-80 .....	1 670	1 686	2 070

## Housing Loans Insurance Corporation

The Housing Loans Insurance Corporation was established by the *Housing Loans Insurance Act 1966* to administer the Federal Government's Housing Loans Insurance Scheme under which approved lenders may be insured against losses arising from the making of housing loans. An amendment to the Act in 1977 broadened the scope of the Corporation's activities and, in addition to loans for the purchase or construction of homes for owner occupancy, loans for the purchase of vacant land and commercial housing propositions became insurable.

Owner occupancy loans are insurable without limit on loan amount, interest rate or term. Loans for the purchase of vacant land are insurable where the borrower intends to erect his home at a later date. In the commercial field loans for rental housing ranging from single

houses or home units to multi-storey structures, together with loans for the purchase and development of land and the building of project housing including home units, are acceptable.

A once only premium is charged by the Corporation at the time a loan is made. With owner occupancy loans comprising 94 per cent and 95 per cent of the valuation of a home the premium is 1.4 per cent of the amount of the loan. Loans from 95 per cent to 100 per cent of valuation carry a loading of 10 per cent on the 1.4 per cent rate. On loans of less than 94 per cent of valuation, the premium falls progressively to 0.1 per cent on loans for less than 76 per cent of valuation. Premium rates for the purchase of vacant land are as for home ownership plus a loading of 10 per cent and attractive rates apply to commercial housing loans.

The Corporation will insure a loan made to enable a borrower to buy or build a house, to buy a home unit, or to discharge an existing mortgage. Loans for alterations and extensions and loans to meet expenses of providing or improving lighting, sewerage, drainage, fences, roads, etc. are also insurable. In addition to loans secured by a registered first mortgage, there is provision for the insurance of second mortgage loans and cover is available for either full-term, fixed-term or five-year loans.

The following table shows the number of loans insured, their purpose and amount, during the past three years:

**Housing Loans Insurance Corporation  
Loans Insured in Tasmania**

Purpose of loan	1976-77		1977-78		1978-79	
	Number	Amount (\$'000)	Number	Amount (\$'000)	Number	Amount (\$'000)
Housing—						
Building a new house .....	149	3 618	61	1 677	164	4 600
Purchase of—						
New house .....						
Established house .....	928	18 903	613	13 852	974	23 000
Discharge of mortgage .....	16	307	14	450	43	1 100
Home Units .....	37	793	30	681	32	800
Total .....	1 130	23 621	718	16 660	1 213	29 500

#### Further References

##### *ABS Publications produced by the Tasmanian Office*

Building Industry, Tasmania (8701.6) (annual, 1979-80 issue released 19.12.80, 20 pp.)

Building Approvals, Tasmania, Monthly Bulletin (8702.6) (monthly, November 1980 released 15.1.81, 6 pp.)

Building Statistics, Tasmania, Quarterly Bulletin (8703.6) (quarterly, June Quarter 1980 released 7.11.80, 11 pp.)

##### *ABS Publications produced by the Canberra Office*

Building Statistics, Australia (8705.0) (quarterly, March quarter 1980 released 9.10.80, 31 pp.)

Population and Dwellings in Local Government Areas and Urban Centres (Preliminary) 1976 Census of Population and Housing, Tasmania (2406.0) (released 15.11.77, 18 pp.)

Characteristics of the Population and Dwellings in Local Government Areas, 1976 Census of Population and Housing, Tasmania (2432.0) (released August 1979, 498 pp.)

Private Sector Construction Establishments, Tasmania 1978-79 (8720.0) (released November 1980, 69 pp.)

Construction Activity in the Public Sector, Australia 1978-79 (8712.0) (released 12 December 1980, 17 pp.)

## Chapter 14

### EDUCATION, LIBRARIES AND THE ARTS

#### SCHOOL EDUCATION

##### Introduction

In 1869 Tasmania became the first Colony in the British Empire to make education compulsory. The ages for obligatory attendance at school were progressively widened: in 1898 school attendance was made obligatory between the ages of seven and 13 years; in 1912 between six and 14 years; and in 1946 Tasmania became the only Australian state to make attendance compulsory up to the age of 16, the starting age being six.

Education in Tasmania is now provided at primary, secondary and tertiary levels by government institutions and to secondary level by non-government schools.

A period of 82 years in which the State accepted no financial responsibility for non-government education ended in 1967 when amendments to the *Education Act* 1932 allowed government grants to independent schools. The assistance is paid on a capitation basis and is dependent upon the level of schooling of the pupil.

The task of Tasmanian educational authorities, as in other Australian states in the post-war period, has been to provide more schools, more teachers and better facilities; the principal factors exerting pressure have been: (i) a rapidly growing school population; (ii) a change in attitude resulting in increased demand for secondary and tertiary education; and (iii) community acceptance in general of the need for better education. A feature of recent years has been the acceptance of greater financial responsibility by the Federal Government in a field which was once exclusively the concern of the State.

The remainder of this section on school education covers the following:

- (i) the State (or Government) school system;
- (ii) the non-government (or independent) schools;
- (iii) teachers and teacher training;
- (iv) examination and Schools Board moderation procedures; and
- (v) functions of the Education Department relating to equipment, libraries, etc.

##### Schools, Government and Non-Government

In 1946 the Tasmanian Government and non-government systems of education were reorganised to provide a three, four or five-year post-primary course. (The pre-war system of secondary education had comprised two stages, a three-year course followed by a two-year course; with a leaving age of 14, and with *selective entry* to government high schools. The proportion of pre-war pupils taking secondary education was very low.)

The dual nature of educational responsibility in Tasmania and the numbers of pupils in both government and non-government schools, in primary and secondary grades, are shown in the following table:

**Government and Non-Government Schools, Tasmania**  
**Pupils Enrolled at 1 August According to Grade of Education**  
**(Number)**

Particulars	1974	1975	1976	1977	1978	1979
Government schools—						
Primary grades (a) .....	49 515	49 976	50 091	50 358	50 910	50 487
Secondary grades .....	29 347	30 042	30 183	29 616	28 843	28 193
Special (b) .....	973	899	908	898	829	857
Total .....	79 835	80 917	81 182	80 872	80 582	79 537
Non-government schools—						
Primary grades (a) .....	7 973	8 204	8 183	8 168	8 308	8 400
Secondary grades .....	6 426	6 393	6 221	6 258	6 356	6 312
Special (b) .....	8	—	27	20	24	26
Total .....	14 407	14 597	14 431	14 446	14 688	14 738
Total all schools	94 242	95 514	95 613	95 318	95 270	94 275

(a) Includes kindergarten classes; see text below.

(b) Includes pupils in special classes attached to ordinary schools.

### *Kindergarten Classes and Preparatory Classes*

In this chapter, the term *kindergarten* is used to describe all pre-school classes, irrespective of whether they operate attached to other schools or whether they operate as separate entities. Separate figures are shown in a later table for enrolments in kindergartens. *Preparatory* classes, commenced in 1974, are included in 'Primary grades'.

## **The State (or Government) School System**

### *Introduction*

The present system had its genesis in the *Education Act* 1885, under which a department was established, headed by a Director of Education, responsible to a Minister. Under the Act, aid to non-government schools was abolished and only in 1967 was this principle re-introduced (with a system of capitation subsidies).

Education is compulsory between the ages of six and 16 years although, in some cases, special exemptions may be obtained. With two exceptions, all schools are co-educational. Education is secular and free; parents buy their children's books, paints, instruments, etc. Pupils' transport is either provided by the Department or subsidised where daily travel costs on public transport exceed 30 cents. The arrangement of transport has been important in the organisation of district and high schools where educational facilities are concentrated and centralised, thereby eliminating many of the smaller country schools.

### *Present Organisation*

Under a Director-General operate three Directors designated: (i) primary; (ii) secondary; and (iii) further education. Regional directors and superintendents are responsible for specific districts; supervisors assist in administration and provide services to schools. Specialist sections deal with curricula, teaching aids, science equipment, speech education, music, physical education, guidance and welfare, library services, educational planning and research, etc.

### *Expenditure on Education*

The following table shows educational expenditure by the State Government from the public account; expenditure from Trust Funds is made by the State acting mainly as agent for the Federal Government.

**Expenditure on Education from Consolidated Revenue, Loan Fund and Trust Funds, Tasmania (\$'000)**

Particulars	1976-77	1977-78	1978-79
<b>From Consolidated Revenue—</b>			
General administration, regulation and research .....	6 533	10 094	11 995
Student transport .....	4 394	4 870	5 250
Primary and secondary .....	79 031	86 378	95 639
Technical .....	7 596	9 327	11 055
University .....	19	36	132
Other higher education .....	5 651	6 320	6 371
Special schools .....	2 069	2 467	2 607
Other .....	55	16	12
<b>Total .....</b>	<b>105 348</b>	<b>119 508</b>	<b>133 061</b>
<b>From Loan Fund—</b>			
General administration, regulation and research .....	9 407	7 136	8 128
Primary and secondary (including pre-school) .....	15 182	17 396	10 767
Technical .....	4 539	3 550	4 009
University .....	—	—	—
Other higher education .....	—	—	—
Adult education .....	162	445	49
Special schools .....	528	158	234
<b>Total .....</b>	<b>29 817</b>	<b>28 685</b>	<b>23 187</b>
<b>From Trust Funds—</b>			
General administration, regulation and research .....	17	354	144
Primary and secondary .....	3 208	5 618	6 554
University .....	17 238	18 696	19 637
Other higher education .....	9 764	12 000	13 688
Adult education .....	22	33	24
Other .....	487	464	785
<b>Total .....</b>	<b>30 736</b>	<b>37 165</b>	<b>40 833</b>
<b>Grand total .....</b>	<b>165 901</b>	<b>185 358</b>	<b>197 080</b>

It should be noted that the preceding table includes amounts voted under other departmental heads for the provision of educational facilities, principally rental and tenancy charges and water, sewerage and other rates paid by the Lands Department.

### Enrolment

Enrolments in Government schools for the last six years were:

**Government Schools, Tasmania  
Number of Pupils at 1 August**

Pupils	1974	1975	1976	1977	1978	1979
Boys .....	41 299	41 712	41 806	41 628	41 432	40 955
Girls .....	38 536	39 205	39 376	39 244	39 150	38 582
<b>Total .....</b>	<b>79 835</b>	<b>80 917</b>	<b>81 182</b>	<b>80 872</b>	<b>80 582</b>	<b>79 537</b>

### Age of Pupils in Each Class

The following table summarises the system of government schooling in Tasmania showing the average ages of pupils in each grade and the type of certificate issued for final year examinations:

**Government Schools, Tasmania**  
**Average Ages of Pupils, Primary and Secondary, in Each Grade, and Certificates Issued**

Primary classes			Secondary classes			
Grade	Mean age at 1.8.79		Grade	Mean age at 1.8.79		Certificate issued
	Years	Months		Years	Months	
Kindergartens—						
Separate .....	4	10	7 ..	12	9	Preliminary School Certificate
Attached .....	5	1	8 ..	13	9	
Preparatory .....	5	8	9 ..	14	9	
1 .....	6	8				School Certificate
2 .....	7	9	10 ..	15	9	
3 .....	8	9	11 (a)	16	11}	Higher School Certificate
4 .....	9	9	12 (a)	18	2}	
5 .....	10	9				
6 .....	11	9				

(a) Secondary grades eleven and twelve indicate pupils in their first or second year at Higher School Certificate level.

### Number of Government Schools

The following table shows the number of government schools in Tasmania:

**Number of Government Schools, Tasmania, at 1 August**

Type of school	1974	1975	1976	1977	1978	1979
Kindergartens (separate) .....	34	38	34	33	36	35
Primary (a) .....	155	152	153	155	159	160
Special .....	18	18	19	18	19	20
District (b) .....	37	38	39	9	10	7
District High (c) .....	—	—	—	27	25	25
High .....	30	32	33	35	35	35
Secondary colleges .....	5	7	7	7	7	7
Total .....	279	285	284	284	291	289

(a) Many have kindergartens attached.

(b) Includes one school classified as primary with secondary top.

(c) The secondary facilities of these schools are being upgraded to full high school standard.

### Kindergarten Education

Until 1969, pre-schools were established on the initiative of groups of parents, the Department providing the cost of the building but eventually recovering half its outlay from the parents. Commencing in 1969, all new facilities for pre-school education were provided in kindergartens attached to primary schools.

At present, there is a mixture of pre-school facilities, some being provided at primary schools, and others constituting separate entities. Pupils at this level of education are shown in the next table:

**Enrolments in Kindergartens, Tasmania, at 1 August**

Particulars	1974	1975	1976	1977	1978	1979
Kindergartens—						
Separate .....	1 449	1 628	1 486	1 398	1 533	1 388
Attached .....	4 538	4 957	5 163	5 224	5 347	5 103
Total (a) .....	5 987	6 585	6 649	6 622	6 880	6 491

(a) Included in other tables as part of total government school enrolments.

*State Primary Schools*

**General:** As mentioned earlier, a preparatory grade was introduced to some schools in 1974. This extra grade will be provided in all primary schools as staffing and accommodation allow. Thus, in future there will be seven primary grades plus kindergarten. The approximate age of entry at 1 January is four years to kindergarten, five years to preparatory and five and a half to six years to grade 1.

**Primary Classes:** Most primary schools have six grades, a kindergarten and, increasingly, a preparatory class. Generally parents may select the school they prefer for their children without restriction but, in some areas, zoning directs children to attend a particular primary school.

In addition 31 district schools have primary grades and draw many pupils from outlying localities. Free transport has made this possible and has led to a reduction in the total number of primary schools.

**Primary Pupils:** The table below shows the ages and numbers of pupils receiving primary education in Tasmanian Government schools:

**Ages and Numbers of Pupils Receiving Government Primary Education (a), Tasmania, at 1 August**

Age last birthday (years)	1974	1975	1976	1977	1978	1979
Under 5 .....	1 888	2 260	2 392	2 633	3 156	3 073
5 .....	6 034	6 145	6 456	6 356	6 286	5 998
6 .....	6 511	7 019	6 749	7 034	6 655	6 411
7 .....	6 289	6 522	6 953	6 828	7 018	6 622
8 .....	6 287	6 436	6 736	6 934	6 774	6 978
9 .....	6 647	6 320	6 369	6 631	6 941	6 674
10 .....	6 939	6 352	6 186	6 260	6 520	6 925
11 .....	6 724	6 856	6 269	5 954	5 996	6 244
12 .....	2 049	1 960	1 869	1 644	1 502	1 511
13 .....	124	98	108	83	59	50
14 .....	13	6	4	—	3	1
15 and over .....	10	2	—	1	—	—
Total—Boys .....	25 613	25 711	25 822	25 892	26 258	26 147
Girls .....	23 902	24 265	24 269	24 466	24 652	24 340
Pupils .....	49 515	49 976	50 091	50 358	50 910	50 487

(a) Includes kindergarten classes; excludes pupils in special schools and classes.

**Primary Curriculum:** The primary school curriculum has undergone considerable change in recent years, both in teaching methods and subject matter. The subjects are English (including reading, spelling, oral and written work), social science, arithmetic, science, music, arts and crafts, religious and moral education, and health and physical education.

**Pupil Grouping:** Promotion within the schools is generally by age at the beginning of the school year, with accelerated progress or repetition of classes at the principal's discretion; grouping may be by ability, where numbers allow, with each child being able to work with his equals in each subject, regardless of age. Differential teaching adapts the school program to meet the widely varying needs and abilities of pupils. The skill subjects of reading, writing, spelling and arithmetic are particularly suited to this method of teaching, testing and grading. A small number of primary schools built in the late 1960s and early 1970s provided open plan areas for up to four classes. Schools now being erected or planned provide both dual and single classrooms with annexes for small group organization to help cater for individual differences in pupils. Some schools have experimented with *non-grading*, a method of organisation which allows pupils in certain subjects to work at their own level of competence; some have adopted family grouping, where children of different ages are in one classroom.



### *Special Schools and Special Classes*

The Department has special schools, and also special and remedial classes in ordinary schools, for children who are physically handicapped, mentally retarded, or otherwise unable to profit from ordinary class teaching. Instruction varies according to the handicap; where it is physical, the main need is to maintain normal or near-normal individual programs. Many pupils eventually can be transferred to ordinary schools into the grades appropriate to their ages.

Schools and classes for slow learners and mentally retarded children follow the curricula for kindergartens and primary schools but no attempt is made to reach examination standards. The teaching of fundamental activities and basic skills is the main concern in these classes which are also to be found in some primary and high schools.

### *Government Secondary Schools*

Almost all children attend secondary classes, starting at an age varying from 11½ to 13 years. High schools and district high schools are non-selective and comprehensive. All, with the exception of two high schools, are co-educational.

The levels of secondary education are: School Certificate endorsed Preliminary (three-year course); School Certificate (four-year course); Higher School Certificate (five or six-year course). The School and Higher School Certificates replaced the Secondary Schools, Schools Board and Matriculation Certificates which were last awarded in 1968.

The essence of the present system is: (i) all assessment and certification come under the authority of the Schools Board of Tasmania; (ii) two certificates only are issued; and (iii) the certificates record achievement in individual subjects. The certificates are:

*The School Certificate:* Awarded in subjects for three and four-year courses; basis of award is by internal assessment and recommendation by schools.

*The Higher School Certificate:* Awarded in subjects studied in fifth or sixth secondary year; basis of award is internal assessment and an external examination conducted by the Board. The University is free to determine what constitutes qualification for university entrance and can nominate the subjects and the levels of achievement at the Higher School Certificate examination necessary for entry; some subjects are not designed primarily for purposes of university entrance and are internally assessed.

A more detailed account of the examinations and procedures adopted for awarding the School and Higher School Certificates is contained in a later section, 'Examinations', and a more detailed account of government matriculation colleges is included in the later section, 'Further Education'.

The following table shows the age and number of students in Tasmanian Government secondary schools:

**Pupils Receiving Government Secondary Education (a), Tasmania, at 1 August, by Age**

Age last birthday (years)	1974	1975	1976	1977	1978	1979
11.....	246	235	188	159	210	205
12.....	4 943	4 977	4 920	4 687	4 199	4 588
13.....	7 137	6 710	6 623	6 539	6 141	5 790
14.....	6 848	7 177	6 971	6 723	6 736	6 273
15.....	5 792	6 101	6 630	6 356	6 153	6 229
16.....	2 671	2 742	2 993	3 073	3 246	2 892
17.....	1 231	1 382	1 240	1 408	1 457	1 423
18 and over.....	479	718	618	771	701	793
Total—Boys.....	15 067	15 420	15 414	15 179	14 680	14 296
Girls.....	14 280	14 622	14 769	14 437	14 163	13 897
Pupils.....	29 347	30 042	30 183	29 616	28 843	28 193

(a) Excludes pupils in special schools and classes.

The next table shows the number of secondary pupils by sex and grade in all government schools:

Secondary Pupils in Government Schools, Tasmania, at 1 August, by Grade

Year	Secondary grade						Total
	7	8	9	10	11	12	
BOYS							
1974.....	3 795	3 693	3 299	2 609	942	729	15 067
1975.....	3 607	3 760	3 521	2 726	936	870	15 420
1976.....	3 602	3 575	3 576	2 925	907	829	15 414
1977.....	3 390	3 604	3 458	2 979	902	846	15 179
1978.....	3 153	3 397	3 485	2 968	883	794	14 680
1979.....	3 151	3 103	3 351	3 036	857	798	14 296
GIRLS							
1974.....	3 438	3 469	3 186	2 530	1 000	657	14 280
1975.....	3 313	3 429	3 341	2 701	1 071	767	14 622
1976.....	3 317	3 319	3 292	2 850	1 180	811	14 769
1977.....	3 149	3 289	3 177	2 814	1 134	874	14 437
1978.....	2 967	3 094	3 224	2 799	1 206	873	14 163
1979.....	2 941	2 945	3 024	2 847	1 142	998	13 897

### District Schools

Area schools, first established in 1935, were replaced by district schools from the beginning of 1973. The area schools were designed to serve rural areas; however, changing concepts of education and parental demands for a higher level of education more closely related to the levels provided by high schools, led to an upgrading of the level of education offered at country secondary schools and to the creation of district high schools.

Subjects for the School Certificate are available to pupils in all district high schools.

### Non-Government (or Independent) Schools

Non-government schools have played a valuable part in Tasmanian education. Policies are framed by principals in conjunction with their senior staff and with the approval of their governing bodies or church.

#### Registration

Non-government schools and teachers are subject to the regulations of the Teachers and Schools Registration Board. This Board consists of nine members who hear and determine all applications for registration and keep a record of all teachers and schools not administered by the Education Department. Every school is graded and teachers are registered in one or more classifications or as special subject teachers. 'Provisional' teachers are those gaining qualifications so they can be registered. The Board may prescribe the mode of classifying teachers, the course of study and training required, the examinations to be passed, and the recognition of overseas qualifications. To secure registration, schools must provide for proper access, drainage, light, ventilation and sanitary conveniences, and inspections may be made by officers appointed by the Board. A daily register of attendance has to be kept.

#### State Assistance to Non-Government Schools and Pupils

The *Education Act* 1932 was amended in 1967 to provide for direct payments to non-government schools. The amount paid is based on the number of pupils enrolled at 1 August each year. The 1978-79 expenditure was \$2 854 000, which included a special grant of \$2 426 000. From the beginning of 1970, the Federal Government also provided per capita grants to independent schools. Details are contained in a later section dealing with Federal

Government activities in education. State legislation passed in June 1970 provides for subsidies related to building loans interest. The amount of subsidy paid in 1978-79 was \$300 000.

Apart from these subsidies, benefits include: free or subsidised transport; use of the facilities of the Department's curriculum centre, media centre, and speech education and guidance branches; attendance at trade and domestic science classes if room is available; and attendance by teachers at Departmental schools of method. Equipment can be purchased through the Supply and Tender Department.

#### *Enrolment at Non-Government Schools*

Most non-government school pupils are in schools controlled by religious denominations, as the next table shows:

**Non-Government Schools and Pupils, Tasmania, at 1 August  
(Number)**

Particulars		Church of England	Uniting Church (a)	Catholic	Seventh-day Adventist	Other schools	All schools
PUPILS							
1974.....	Boys	875	257	4 651	76	1 066	6 925
	Girls	734	349	5 129	76	1 194	7 482
1975.....	Boys	895	226	4 675	71	1 150	7 017
	Girls	818	351	5 156	72	1 183	7 580
1976.....	Boys	889	211	4 723	85	1 038	6 946
	Girls	805	331	5 113	86	1 150	7 485
1977.....	Boys	906	213	4 680	92	1 016	6 907
	Girls	807	341	5 204	77	1 110	7 539
1978.....	Boys	929	211	4 745	72	1 013	6 970
	Girls	851	375	5 351	83	1 058	7 718
1979.....	Boys	958	287	4 741	88	861	6 935
	Girls	850	583	5 467	82	821	7 803
SCHOOLS							
1979.....		4	2	37	4	18	65

(a) From 1979; previously Presbyterian.

The following table shows the number of secondary pupils by sex and class in all non-government schools:

**Secondary Pupils in Non-Government Schools, Tasmania, at 1 August 1979, by Year**

Pupils	Secondary year						Total
	1	2	3	4	5	6	
Boys .....	600	631	566	615	276	194	2 882
Girls .....	679	730	733	675	388	225	3 430
Total .....	1 279	1 361	1 299	1 290	664	419	6 312

Of the 25 schools in 1979 which catered for secondary pupils, 15 had Higher School Certificate classes.

Most independent school pupils are to be found in primary classes, and most of them are in Catholic schools. The following table shows the numbers and ages of all pupils in non-government school primary and sub-primary classes:

Pupils Receiving Non-Government Primary Education, Tasmania, at 1 August, by Age

Age last birthday (years)	1974	1975	1976	1977	1978	1979
Under 7 .....	2 496	2 773	2 737	2 603	2 470	2 322
7 .....	946	938	1 039	1 079	1 164	1 136
8 .....	906	988	997	1 061	1 120	1 176
9 .....	1 044	977	960	1 061	1 096	1 199
10 .....	1 090	1 072	1 020	1 040	1 114	1 136
11 .....	1 112	1 106	1 091	1 005	1 077	1 118
12 .....	346	319	312	302	253	298
13 .....	29	28	25	16	12	15
14 and over .....	4	3	2	1	2	-
Total—Boys .....	3 903	4 056	4 024	4 018	4 072	4 040
Girls .....	4 070	4 148	4 159	4 150	4 236	4 360
Pupils .....	7 973	8 204	8 183	8 168	8 308	8 400

The following table shows the ages of pupils in non-government schools at secondary level:

Pupils Receiving Non-Government Secondary Education, Tasmania, at 1 August, by Age

Age last birthday (years)	1974	1975	1976	1977	1978	1979
11 and under .....	97	84	101	76	69	65
12 .....	1 063	1 059	991	980	1 047	1 000
13 .....	1 343	1 362	1 266	1 322	1 292	1 257
14 .....	1 341	1 344	1 415	1 367	1 316	1 236
15 .....	1 231	1 174	1 234	1 268	1 271	1 347
16 .....	816	866	732	809	813	847
17 .....	443	425	403	381	458	445
18 and over .....	92	79	79	55	90	115
Total—Boys .....	3 022	2 961	2 913	2 877	2 892	2 882
Girls .....	3 404	3 432	3 308	3 381	3 464	3 430
Pupils .....	6 426	6 393	6 221	6 258	6 356	6 312

### Teachers and Teacher Training

There is a variety of courses available to trainee teachers in this State. The University of Tasmania awards the Diploma of Education after one year of a post-graduate course in which graduate students train as infant, primary or secondary teachers. Since 1975, a four-year course leading to the degree of Bachelor of Education has been provided and a Master's degree is also offered. There is also a post-graduate course leading to the degree of Bachelor of Special Education. The Tasmanian College of Advanced Education provides a basic three-year course with an extension to four years for some selected students. On completion of the three-year course the student is awarded the Diploma of Teaching, and on completion of a four-year course the student qualifies for the degree of Bachelor of Education. A course is provided for full-time and part-time graduate students leading to the degree of Master of Education.

Each year some students are given the opportunity of training in other states in areas for which courses are not available in Tasmania, e.g. speech pathology (at the University of Queensland), Asian languages (at the Australian National University, Canberra) and training for teaching deaf children (at the Glendonald Institute in Victoria).

The following table shows the number of teachers and instructors in Tasmanian Government schools (excluding technical colleges):

Number of Government School Teachers and Instructors (a), Tasmania, at 1 August 1979

Type of school	Full-time			Part-time and casual		
	Males	Females	Persons	Males	Females	Persons
Kindergarten .....	1	155	156	—	11	11
Special .....	29	96	125	—	37	37
Primary .....	415	1 502	1 917	25	393	418
District—						
Primary .....	10	31	41	—	11	11
Secondary .....	1	—	1	3	4	7
District High—						
Primary .....	43	198	241	3	54	57
Secondary .....	158	119	277	16	66	82
High .....	939	724	1 663	15	60	75
Secondary colleges .....	220	113	333	16	31	47
Total .....	1 816	2 938	4 754	78	667	745

(a) Excludes teachers in non-teaching positions (e.g. curriculum branch staff, guidance officers, speech education, music and training aid centres).

The following table shows the number of teachers and teachers-in-training in Tasmania:

Full-Time Teaching Staff in Government Schools (a) and Teachers-in-Training, Tasmania, at 1 August

Type of teacher	1974	1975	1976	1977	1978	1979
Head teachers—						
Males .....	234	233	232	230	218	224
Females .....	16	20	20	23	29	25
Other teachers—						
Males .....	1 405	1 520	1 549	1 610	1 692	1 669
Females .....	2 560	2 657	2 795	2 739	2 896	2 848
Total teachers (a)—Males .....	1 639	1 753	1 781	1 840	1 910	1 893
Females .....	2 576	2 677	2 815	2 762	2 925	2 873
Teachers-in-training—						
Males .....	465	435	445	462	509	529
Females .....	1 060	1 130	1 203	1 215	1 231	1 245

(a) Includes teachers in non-teaching positions (e.g. curriculum branch staff, guidance officers, etc.) but excludes supervisors, those engaged in technical education, part-time teachers, and those on long service leave.

In primary schools in 1979, 78 per cent of the full-time teachers were females. All subjects are taught by each teacher in these schools but itinerant teachers, when available, take physical education, music and speech classes on a circuit basis with each teacher being responsible for the teaching of the subject in several schools. In the post-primary schools, most teachers are specialists attached to subject departments within each school. In the district high schools, because of the smaller numbers of secondary pupils one teacher may take several subjects; rural science, home arts and crafts and technical subjects are usually handled by resident or itinerant specialists.

**Teacher Training:** Numbers of teachers-in-training for recent years are shown in the next table:

## Teachers-in-Training, Tasmania, at 1 August

Institution attended	1974	1975	1976	1977	1978	1979
MALES						
University of Tasmania .....	237	217	224	207	210	195
Tasmanian College of Advanced Education .....	227	217	218	251	295	329
Specialist trainees .....	1	1	3	4	4	3
Total .....	465	435	445	462	509	527
FEMALES						
University of Tasmania .....	344	364	411	389	360	342
Tasmanian College of Advanced Education .....	704	752	772	804	847	869
Specialist trainees .....	12	14	20	22	24	29
Total .....	1 060	1 130	1 203	1 215	1 231	1 240

## Examinations

*The Schools Board*

The Schools Board of Tasmania was constituted on 31 October 1944 by the *Education Act 1944* to devise and govern new systems of awarding school certificates.

In 1946 the school leaving age in Tasmania was raised to 16 years and the Board instituted a four-year course of academic secondary education leading to the Schools Board Certificate. The Intermediate Examination, which had been conducted by the University at third-year secondary school level until 1938, had been replaced by similar examinations conducted by the State Education Department and the Associated Public Schools. These were replaced in 1946 by the Schools Board Certificate, studied at fourth-year level.

The Schools Board Certificate demanded a level of achievement in basic and optional subjects after a four-year course of general education. Secondary schools were allowed the choice between an accrediting system or an external examination.

As a result of the proposals of the Schools Board and the Radford Report, the Schools Board was re-constituted with a membership of 21 on 1 September 1966, to allow the Board to become, in 1969, the sole examining and certifying body at the secondary level. A further amendment to the Act in 1974 made provision for the Council of Advanced Education to nominate members, and increased the membership of the Board to 23 as from 1 July 1974.

An important change of considerable significance to employers, and to the prerequisites they demand of applicants for employment, occurred when new types of certificates were introduced in 1969. There are only two such certificates issued, known as the *School Certificate* and the *Higher School Certificate*. These replaced all previous certificates which were *group* certificates demanding, in varying degrees of detail, certain compulsory subjects or groups of subjects as prerequisites to the award of the certificate. The essential difference is that both of the new certificates are *subject* certificates requiring no compulsory subjects or groups of subjects to be studied.

*The School Certificate*

For the School Certificate there are no external examinations and awards are determined by internal assessment with a wide variety of methods of evaluation. Final results of the School Certificate are notified to candidates in December by the principal of the school attended by the candidate. Each candidate receives a printed result slip showing the level of study and the award given in each subject. The formal certificate is issued by the Schools Board of Tasmania during the following year.

The subjects for this certificate may be taken at various levels and a wide choice is available to cater for different levels of ability and interests. A preliminary award may be granted after the third year of secondary education to those candidates who leave school at this stage.

### *Moderation*

The Schools Board of Tasmania is responsible for ensuring development of satisfactory moderation procedures and the maintenance of subject standards. To this end, the State is divided into four *moderation regions*. Moderation is the method used to ensure reasonable comparability of standards between schools throughout the State. Moderation involves a number of moderation bodies, whose members include members of the Schools Board, superintendents of high schools, high school principals and other high school staff. (Moderation procedures are covered in greater detail in the 1977 *Year Book*.)

### *The Higher School Certificate*

This is taken at the end of the fifth or sixth year of secondary education. The certificate is awarded as a result of examinations conducted in November each year. Subjects may be studied at Level I, Level II or Level III, but all levels are not necessarily available for all subjects. Requirements for matriculation are determined by the University of Tasmania from the results of the Higher School Certificate examinations conducted by the Schools Board of Tasmania in certain Level III subjects approved for matriculation purposes.

The Schools Board of Tasmania has decided that the final award in all Level III subjects will be determined by combining two components—a component determined as a result of an external examination and an internally assessed component. The weighting of the internally assessed component in each subject is determined on the advice of the appropriate Subject Committee, but must not be less than 25 per cent and not more than 50 per cent of the total award. The Board has ruled that the school assessments for each class must be standardised against the external examination results of the members of that class.

In Level II subjects, awards are determined by the candidate's school after the school has taken part in a consultative system, which aims to provide comparability in standards between schools in the subject. The Board appoints a Subject Adviser in each subject field. The Subject Advisers are responsible to the Schools Board for the co-ordination of assessment procedures in their particular subject field and for ensuring that satisfactory standards are maintained. In 1981 in those subjects which do not have Level III syllabuses, the Level II subjects have been written in the form of units of study. Each unit is expected to require a minimum of 40 hours of study. In order to obtain an award in any one of these subjects candidates must complete satisfactorily the study of three units.

## **Other Education Matters**

Various functions of the Education Department are described in the following section; some of these are applicable to both government and non-government schools.

### *Equipment, Services and Other Resource Materials*

The Tasmania Media Centre provides specialised assistance to schools by the development, production and supply of audio-visual hardware and software.

All government schools are equipped with colour television receivers. To overcome the difficulty in planning timetables so that classes may view educational broadcasts, all secondary schools and colleges, all district high schools, and 18 per cent of primary schools have been provided with video recording systems. The system is based on the mobile video cassette recorder which allows schools to record television broadcasts 'off-air' for replaying at convenient times and locations. This development has led to television being as flexible a teaching aid as the longer established pre-recorded radio program.

The Tasmania Media Centre records all A.B.C. radio broadcasts and distributes copies of tapes to schools each week. The Centre also operates a Media Library. Similar resources are available at the Centre's two annexes at Launceston and Burnie.

The Centre's electronics section prepares specifications, evaluates, develops and modifies audio-visual hardware. All approved equipment supplied to government schools is maintained free of cost by the Tasmania Media Centre.

The Centre also co-ordinates the production of integrated resource materials to support areas of the school curriculum. Other services offered to schools by the Centre include in-service training of teachers in the operation and maintenance of equipment, and the

production or modification of resource materials; advice on the organisation and management of resources; and the provision of two mobile media vehicles for in-service education of teachers at schools which have inadequate access to the Centre or its annexes.

### *Libraries*

A significant development program in this field has been implemented in recent years, particularly in the high schools and matriculation colleges where substantial print and audio-visual resource collections have been built up in attractive and spacious library suites. Teacher-librarians are now appointed to the larger primary and district schools. Grants are made directly to schools on a per capita basis for the purchase of library resources.

The introduction of a post-graduate course in librarianship at the Tasmanian College of Advanced Education has made possible the recruitment and training of up to 15 new teacher-librarians each year.

The Library Services Branch, housed in the State Library building, Hobart, is under the direction of a supervisor of libraries. It offers expert bibliographic and technical advice to schools and controls a central cataloguing service to schools. The Branch works in very close co-operation with the State Library of Tasmania.

### *Radio and Television Programs*

Tasmania is well advanced in the availability and use of educational television and radio broadcasts. The Australian Broadcasting Commission provides programs which are selected by planning and appraisal committees upon which curriculum officers and teachers are represented. To facilitate the production of Tasmanian programs and the selection of programs from other sources the A.B.C. employs a State Supervisor of Education, radio and television producers, and associated staff. The Education Department provides a Secondary and a Primary liaison officer seconded full-time to the A.B.C.

### *Safety Officers*

Transport Commission officers visit the schools regularly to give lectures and practical demonstrations dealing with various aspects of road safety. Driver education courses are given in some schools. Periodically, students are reminded of the dangers associated with explosives, firearms and drug abuse.

### *Parents and Friends Associations*

One of the functions of these bodies is fund-raising for the provision of subsidised equipment, materials and books. They also act as a valuable forum for discussions on education and this role is assuming greater importance.

### *Migrant Education*

This is arranged by the Department at certain schools or by combined radio-correspondence lessons to teach English to migrants. The cost of migrant education is reimbursed by the Federal Government. The Department has separate branches to provide assistance, mainly in English language learning, for both child and adult migrants. There is an increasing emphasis on multi-cultural education (See also 'Federal Government Activities in Education').

### *Division of Recreation*

The Tasmanian Government formed the Division of Recreation as a branch of the Education Department in 1974-75 in response to the establishment of the Federal Department of Tourism and Recreation, and the need for governments to play a more significant role in the provision of leisure opportunities. It was formed to assume prime responsibilities for recreation in the State and to complement the work of existing State departments and agencies. Its major areas of activity include sports development, children's programs, research, the provision of leisure opportunities for the disadvantaged, and camping and adventure activities.

Regional Recreation Officers endeavour to service and support existing groups and municipal councils and generally promote community involvement in recreational opportunities. These officers are available to advise and assist existing clubs and organisations



on state resources, on the conduct of programs, the provision of facilities, equipment and leadership, and to establish new groups as well as to conduct recreation programs for the community.

#### Financial Assistance

Currently the principal forms of assistance payable to parents or guardians of students are:

- (i) *School Certificate Allowances* payable to parents or guardians of full-time students undertaking their fourth year of secondary education. The allowance, subject to a means test, amounts to a maximum of \$100 per annum.
- (ii) *Special Bursaries* awarded in cases of necessitous circumstances.
- (iii) *Loan Issue Supplies* provided to assist parents who are unable to meet the cost of text books, materials and subject levies associated with educating their children.

## FURTHER EDUCATION

### Division of Further Education

As from 1 January 1979, the three sectors of Technical and Further Education, Adult Education and Secondary Colleges were brought together to form the Division of Further Education within the Education Department of Tasmania. Establishment of the Division of Further Education was supported in recommendations in the TEND (Tasmanian Education Next Decade) and Kearney (Ministerial Working Party on Tertiary Education) Reports in 1978. The Division embraces the philosophy of community college education—having multi-purpose institutions to cater for all levels of community educational and cultural demand between compulsory education and higher education.

The Report 'Further Education in Tasmania' of December 1978 set the foundations for the development of community colleges and an increased regional approach to Further Education. As a result, Regional Superintendents of Further Education were appointed in the north-west, north and south to work with regional co-ordinating committees on community college development. A senior committee, the State Council for Further Education was also established to recommend priorities for further education in Tasmania to the Director-General of Education.

The Division is headed by the Director of Further Education, who is supported by a Deputy Director, a Senior Superintendent and three Regional Superintendents. It controls colleges in Hobart, Launceston, Devonport, Burnie and Queenstown which cater for senior secondary, technical and adult education. It also controls centres in Smithton, Scottsdale, Campbell Town, Oatlands and Huonville which provide a limited range of course offerings.

The following table shows the number of colleges, teachers and students in further education and yearly expenditure for 1979:

Further Education, 1979

Particulars	Type of institution			
	Community colleges	Technical colleges	Adult education regions	Secondary colleges
Number of institutions—	1	7	3	7
Teaching staff—				
Full-time .....	421		17	309
Part-time .....	706		n.a.	n.a.
Students—				
Full-time .....	1 444		—	3 896
Part-time .....	14 355		(a) 17 016	
Expenditure (\$'000) .....	14 500			7 500

(a) Number of enrolments rather than actual number of students.

### Community Colleges

The first such college, the West Coast Community College, was established at Queenstown in 1977. From 1 January 1980, the Launceston Technical College, the Launceston Matriculation College and the Launceston and Campbell Town Adult Education Centres became the Launceston Community College. Also from that date Alanvale College became Alanvale Community College. From 1 January 1981, it was proposed to establish the Burnie Community College and the Devonport Community College. The former will absorb the present Burnie Technical College, Hellyer College and the Burnie Adult Education Centre, while the latter will be constituted from Devonport Technical College, The Don College and Devonport Adult Education Centre.

### Technical Education

#### Courses

*Certificate Courses:* These courses cater for middle level vocations for students who wish to work in a para-professional field. On successful completion of a course, a certificate is awarded by the Division of Further Education, Education Department. Courses provided include engineering, municipal administration, accounting, child care, social welfare and building.

*Trade Courses:* These courses are provided for apprentices as an adjunct to on-site training performed by employers. Such training involves both practical and theoretical aspects of a trade and is offered in association with the Apprenticeship Commission of Tasmania. The introduction of trade courses in both farming and horticulture in 1979 indicates a widening of the definition of trade courses within Tasmania. Post-trade and advanced skill courses are also provided.

*Correspondence Tuition:* This is administered through the External Studies Service and is intended for isolated students and others who are unable to attend regular classes, e.g. shift workers, housewives and the sick. Many of the above-mentioned courses are available.

*Vocational Courses:* Courses in this category provide for non-apprentice training, including commercial and secretarial, supervision, fashion and clothing manufacture.

*Teacher Education:* Teacher education courses are available to teachers on a part-time basis and cover general teaching theory and the theory and method of trade and vocational teaching to adolescents and adults.

*Technical In-Service Education:* Non-formal staff development programs are organised through the Technical In-Service Education Committee. These are related specifically to the needs of teaching and ancillary staff in Tasmanian technical colleges and in Adult Education.

#### Examinations

These are conducted by the Division of Further Education in July and November each year. Papers are set and marked, or assessments carried out, on a Statewide basis except for many first and second year subjects in which case each college makes its own arrangements.

### Government Secondary Colleges

Secondary college students have been primarily concerned with Higher School Certificate subjects mostly undertaken as two-year courses. The first such college was the Hobart Matriculation College (previously Hobart High School)—no junior students were enrolled after 1961 and by 1965 all students were attempting matriculation. In 1967 Launceston High School reached this stage and in 1968 the Elizabeth Matriculation College, in Hobart, was opened and elimination of junior students was completed by 1970. In 1973 the newly constructed Rosny College was opened to serve the eastern shore suburbs of Urban Hobart and the new Don College was opened at Devonport. Alanvale College at Launceston was opened in 1975 while the Hellyer College at Burnie was opened in 1976 to replace Higher School Certificate classes previously available at Burnie High School.

The advantage originally claimed for these colleges was that they concentrated specialist teachers in the one centre; furthermore, the students benefited to the extent that the colleges were an intermediate step between the more disciplined high school and university. However, with many students not seeking to enter university or the Tasmanian College of Advanced

Education, the need to provide a wider range of subject options has been a factor in the decision to establish community colleges. For an explanation of higher school certificate examinations, see the earlier section, 'Examinations'.

### Adult Education

#### *Origin and Organisation*

Establishment of a mechanics' institute in Hobart in 1827 was the start of adult education in Australia. Mechanics institutes, later established in other cities, provided public lectures and libraries. The first Tasmanian Workers Educational Branch was begun in Hobart in 1913 to promote the higher education of working men and women. For many years the W.E.A. worked in conjunction with the University of Tasmania and provided classes and public lectures.

From 1948 to 1975 adult education was administered by a statutory board established under the *Adult Education Act* 1948. From 1 January 1976, the *Education Act (No. 2)* 1975 came into force, which proclaimed an advisory Adult Education Board and a Division of Adult Education within the Education Department. On 1 January 1979, adult education came under the control of the Division of Further Education.

Hobart has four Adult Education Centres: at the Domain, South Hobart, North Hobart and Rosny College. There is also an inquiries and enrolment centre in the city centre. There are also centres and offices established in Launceston, Devonport, Burnie, Queenstown, Oatlands and Campbell Town. Many of these will be absorbed into the community colleges as they are established.

#### *Operations*

**Courses:** An extremely wide variety of courses, ranging in duration from one term to one year, is offered. A function of the Division is to initiate innovatory programs and to respond to changes in community needs. Subject areas include basic education, business studies, foreign languages, arts and crafts and music and dance. In co-operation with the Federal Department of Immigration and Ethnic Affairs, the Division arranges courses in Hobart in advanced English for migrants and other courses for migrants throughout the State.

**Schools, Seminars and Special Events:** In 1979, in addition to a diverse summer school program featuring art, string music, historic buildings and landscape gardening, there were many special events. The Division is also active in the community arts area and arranges, often in association with other bodies, art exhibitions, music recitals and drama events.

**Discussion Groups:** Throughout the State, groups of people meet once a month to study and discuss books of educational value and other material. This is a joint service given by the State Library of Tasmania and the Division of Further Education.

**Residential College:** 'The Grange' Residential College at Campbell Town, with accommodation for 30 students, has been leased from the National Trust since 1964. It is an old colonial country home built in 1848. It is one of only two adult education residential colleges in the country and is recognised by educationists as an institution of unusual worth.

## TERTIARY EDUCATION

### University of Tasmania

#### *Founding*

The University of Tasmania was founded in 1890 and was the fourth university to be established in Australia. When teaching began in 1893 with three lecturers and six students, it occupied 1.6 hectares of land on the Queen's Domain at Hobart.

#### *Residential Colleges*

There are three residential colleges in the University. Christ College, affiliated with the University in 1933, was moved to new premises on the University Campus at Sandy Bay in 1962 and provides accommodation in single study-bedrooms for 138 male and female

students, eight tutors and a deputy warden. Hytten Hall was opened in 1959 with accommodation for 124 male students. Extensions raised this figure to 180 students with about half accommodated in single study-bedrooms and the remainder in double rooms. Female students were admitted for the first time in mid-1978. However, from 1981, Hytten Hall will be used as faculty accommodation. St John Fisher College, opened in 1962, accommodates 86 male students in single study-bedrooms and is under the direction of the Catholic Church. Jane Franklin Hall was founded by the Tasmanian Council of Churches in 1950 as a hall of residence for women students. The Hall now provides accommodation for 150 male and female students.

### Buildings

The University site at Sandy Bay was chosen in 1944. Until 1957 temporary huts were used extensively, mainly by the rapidly growing science departments. In 1957 the first permanent building was erected and by 1973 all departments of the then eight faculties were housed in permanent buildings.

Since that date the new buildings completed are: a computer centre; a child care centre; a cosmic ray observatory; a sports and recreation centre; and the University Centre which consists of a complex of lecture theatres (which can be combined to form a single 800-seat hall), a fine arts gallery and a classics museum. A major extension to the Arts-Commerce-Education building has been completed as well as a further extension to the Union building.

### Finance

From 1974 the Federal Government assumed full responsibility for tertiary education. Tuition fees were abolished as from 1974 and an assistance scheme was introduced to assist full-time students, subject to a means test.

The following table shows the income and expenditure of the University of Tasmania for recent years:

University of Tasmania: Income and Expenditure  
(\$'000)

Particulars	1976	1977	1978	1979
INCOME				
Recurrent purposes—				
Federal Government .....	14 892	16 213	17 377	19 241
Other .....	318	677	841	324
Total .....	15 210	16 890	18 218	19 565
Equipment grants—				
Federal Government .....	475	513	522	571
State Government .....	1	16	3	1
Total .....	476	529	525	572
Other purposes—				
Halls of residence .....	209	216	233	256
Prizes, scholarships and benefactions .....	105	125	214	215
Research grants .....	546	492	608	999
Other .....	63	53	37	1 451
Total .....	923	886	1 092	2 921
Total income .....	16 609	18 305	19 835	23 058

**University of Tasmania: Income and Expenditure—continued**  
(\$'000)

Particulars	1976	1977	1978	1979
EXPENDITURE				
Recurrent purposes—				
Academic activities (incl. research) . . . . .	9 801	10 992	12 097	12 947
Academic services . . . . .	1 543	1 773	2 055	2 270
Student and staff services . . . . .	290	288	313	320
General university services . . . . .	3 224	3 660	3 769	3 906
Other . . . . .	113	24	16	251
Total . . . . .	14 971	16 737	18 250	19 694
Equipment grants—				
Academic activities (incl. research) . . . . .	79	247	249	284
Academic services . . . . .	130	329	229	272
General university services . . . . .	36	26	38	17
Total . . . . .	245	602	516	573
Other purposes—				
Halls of residence . . . . .	247	241	248	266
Prizes, scholarships and benefactions . . . . .	272	94	85	205
Research grants . . . . .	419	524	623	858
Other . . . . .	23	1	2	1 022
Total . . . . .	961	860	958	2 351
Total expenditure . . . . .	16 177	18 199	19 724	22 618

*Government of the University*

The governing body of the University is the Council, comprising the Chancellor, the Vice-Chancellor and 19 members, 17 of whom are elected or appointed and two, the Director-General of Education and the Deputy Chairman of the Professorial Board, are *ex officio*.

The Vice-Chancellor is the chief academic and executive officer. He presides over the Professorial Board which is the governing body on academic matters.

The following table shows the number of teaching staff and students:

**University of Tasmania: Academic Staff (Full-time) and Students Enrolled at 30 April**

Particulars	1974	1975	1976	1977	1978	1979
Academic staff—						
Professors . . . . .	33	33	35	38	38	38
Other . . . . .	238	247	255	260	270	263
Total academic staff . . . . .	271	280	290	298	308	301
Individual students enrolled . . . . .	3 414	3 399	3 539	3 525	3 517	3 435

## Staff and Students

The next table shows student enrolment by course:

University of Tasmania: Enrolments, 1979

Course	Students enrolled			
	New enrolments 1979 (a)	Total enrolments at 30 April		
		Males	Females	Total
Master and Doctor degrees .....	81	212	57	269
Bachelor degrees—				
Agricultural Science .....	14	32	14	46
Arts .....	394	433	540	973
Commerce .....	102	193	30	223
Economics .....	56	92	26	118
Education .....	30	36	83	119
Special Education .....	7	—	12	12
Engineering .....	25	133	4	137
Surveying (b) .....	12	47	—	47
Law (c) .....	65	97	38	135
Medicine (d) .....	56	195	82	277
Pharmacy (b) .....	24	36	23	59
Science .....	181	358	159	517
Combined B.A./LL.B. ....	20	65	21	86
Combined B.Ec./LL.B. ....	1	9	2	11
Combined B.Com./LL.B. ....				
Combined B.Sc./LL.B. ....	2	2	—	2
Total .....	989	1 728	1 034	2 762
Non-degree courses—				
Education .....	218	121	136	257
Other (e) .....	112	85	62	147
Total .....	330	206	198	404
Total all courses .....	1 400	2 146	1 289	3 435

(a) New enrolments refer to those students who either commenced studies for higher degrees or, being undergraduates, enrolled at the University of Tasmania for the first time in 1978, or transferred from one faculty to another.

(b) Bachelor of Surveying and Bachelor of Pharmacy introduced in 1978.

(c) From 1975, students must complete one year in another faculty before starting law.

(d) Students may enrol for an honours degree in Medical Science after completing at least three years of M.B., B.S. course.

(e) Of students classified as 'other' 14 students were enrolled for a master degree qualifying examination. The remainder were enrolled for university subjects but were not proceeding to either a degree or diploma.

## Degrees Conferred

The following table shows degrees conferred:

University of Tasmania: Degrees Conferred (a) During Year Ended 30 June

Degree		1974	1975	1976	1977	1978	1979
HIGHER DEGREES							
Higher Doctor .....	Males	1	2	—	—	2	1
	Females	—	—	—	—	—	—
Doctor of Philosophy .....	Males	14	7	14	7	14	14
	Females	1	4	3	1	4	2
Master .....	Males	11	8	10	14	10	21
	Females	2	1	—	3	5	5

## University of Tasmania: Degrees Conferred (a) During Year Ended 30 June—continued

Degree		1974	1975	1976	1977	1978	1979
BACHELOR DEGREES (b)							
Agricultural Science	Males	13	10	8	7	7	7
	Females	5	5	1	3	1	—
Arts	Males	120	96	91	90	93	112
	Females	169	127	131	121	130	139
Commerce	Males	—	—	—	—	8	11
	Females	—	—	—	—	—	2
Economics	Males	67	58	55	53	33	23
	Females	5	18	5	10	6	5
Education	Males	—	—	—	—	4	11
	Females	—	—	—	—	8	30
Engineering	Males	34	27	38	22	29	24
	Females	1	—	1	—	—	—
Law	Males	29	17	29	22	25	34
	Females	7	4	7	7	8	10
Medical Science	Males	14	38	25	22	37	27
	Females	11	5	15	13	7	13
Medicine/Surgery	Males	12	15	19	13	35	26
	Females	10	5	7	11	3	13
Pharmacy	Males	—	—	—	—	—	9
	Females	—	—	—	—	—	14
Science	Males	101	96	97	90	104	113
	Females	35	38	36	35	33	42
Surveying	Males	—	—	—	—	—	11
	Female	—	—	—	—	—	—
Total bachelor degrees	Males	390	357	362	319	375	408
	Females	243	202	203	200	196	268
	Persons	633	559	565	519	571	676

(a) Excludes honorary degrees.

(b) Includes bachelor degrees with honours.

## Advanced Education in Tasmania

## Concept

Education at tertiary level has been available at universities for many years but there have also been professional courses provided by other institutions; in Tasmania technical colleges have provided courses of this type in addition to playing their main role in providing apprentice training, trade courses, etc. The development of colleges of advanced education in Australia did not represent a radical innovation but rather a rationalisation and re-organisation of tertiary education courses.

In general terms, colleges of advanced education are now providing tertiary education and training with a vocational emphasis, as distinct from the academic education provided by universities (though, of course, some university courses in Australia tend to be also vocational, e.g. legal and medical courses). In some states, advanced education is being developed on a base provided by existing institutions but in Tasmania and the A.C.T. separate colleges have been established.

## History

Following a national seminar on planning for colleges of advanced education held in Hobart towards the end of 1967, the educational specifications and a master plan for the Mt Nelson Campus were prepared. In June 1969 the contract for the Resource Materials Centre (stage 1) of the project was let. Appointment of staff to the College commenced in 1971 and during 1972 the first on-site lectures were held at Mt Nelson. In 1973 a campus of the College was established at Newnham (a suburb of Launceston).

*Advanced Education Council and College*

The *Advanced Education Act 1968* established the Council of Advanced Education. An amendment to this Act now provides for the appointment of 15 members of whom one shall be the person holding the office of the Principal; two shall be officers of the Advanced Education Service (other than the Principal); and one shall be a person who is undertaking a course of advanced education.

The Tasmanian College of Advanced Education is organised into the Divisions of Business and Administrative Studies, Science and Technology, Teacher Education and Education Services, the Schools of Art, General Studies and Environmental Design, and the Conservatorium of Music.

A Committee on Post-Secondary Education, appointed jointly by the Federal and State Governments in April 1975, recommended major changes in the structure of the Tasmanian College of Advanced Education. The proposals were for widening the range of courses at the University, in Hobart, and establishing the Newnham college as the centre of advanced education in the north of the State. Implementation of this restructuring is now well advanced.

*Students and Courses*

The next table shows total enrolments for a three-year period:

**College of Advanced Education: Enrolments, Tasmania  
(number)**

Description	1977			1978			1979		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Full-time .....	747	1 089	1 836	712	1 143	1 855	716	1 177	1 893
Part-time .....	494	256	750	618	323	941	581	353	934
Total .....	1 241	1 345	2 586	1 330	1 466	2 796	1 297	1 530	2 827

Awards are made at four levels: bachelor degree, diploma, graduate diploma and master's degree. The following table shows the number of students enrolled by course in 1979:

**College of Advanced Education: Enrolments by Course, Tasmania 1979  
(Number)**

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Course						
Applied chemistry .....	7	1	21	3	28	4
Applied science .....	-	-	-	-	-	-
Art .....	1	1	1	3	2	4
Art and craft .....	38	23	19	48	57	71
Visual arts .....	54	67	1	3	55	70
Architecture .....	-	-	18	-	18	-
Building operations .....	-	-	1	-	1	-
Environmental design .....	63	14	-	-	63	14
Landscape planning .....	-	-	1	1	1	1
Urban planning .....	-	-	16	4	16	4
Accounting .....	47	10	131	28	178	38
Business Administration .....	2	-	53	5	55	5
Management .....	-	1	55	13	55	14
Legal practice .....	32	7	-	-	32	7
Public administration .....	-	-	26	-	26	-
Valuation (a) .....	3	-	3	-	6	-
Civil engineering .....	1	-	9	-	10	-
Electrical power engineering .....	1	-	1	-	2	-
Electronic engineering .....	5	-	2	-	7	-
Engineering (unspecified) (b) .....	-	-	-	-	-	-
Mechanical engineering .....	2	-	2	-	4	-



**College of Advanced Education: Enrolments by Course, Tasmania 1979—continued**  
(Number)

Course	Full-time		Part-time		Total	
	Males	Females	Males	Females	Males	Females
Technology .....	—	—	7	1	7	1
General Studies .....	3	6	49	60	52	66
Librarianship .....	15	19	2	7	17	26
Social work .....	33	74	6	11	39	85
Music .....	14	20	4	12	18	32
Medical technology .....	22	22	18	15	40	37
Pharmacy .....	1	—	—	—	1	—
Teacher education .....	111	600	125	130	236	730
Other education .....	261	312	10	9	271	321
<b>Total Students .....</b>	<b>716</b>	<b>1 177</b>	<b>581</b>	<b>353</b>	<b>1 297</b>	<b>1 530</b>

- (a) A two-year course leading to a diploma is offered. The second year must be completed either by correspondence with, or attendance at, the Royal Melbourne Institute of Technology.
- (b) Students specialise in civil, electrical, mechanical or electronic engineering after completion of the first year common course.

### Teaching Staff

The next table shows teaching staff by full-time or part-time status:

**College of Advanced Education: Teaching Staff (a) Tasmania**

Description	1974	1975	1976	1977	1978	1979
Full-time .....	184	203	205	201	210	204
Part-time .....	43	44	17	18	38	31
<b>Total .....</b>	<b>227</b>	<b>247</b>	<b>222</b>	<b>219</b>	<b>248</b>	<b>235</b>

(a) Teaching effort expressed as full-time equivalent units.

### Finance

At the June 1973 Premiers' Conference the states accepted the Federal Government's offer to assume full financial responsibility for tertiary education from 1 January 1974. (The amounts of recurrent expenditure saved by the states were deducted from their financial assistance grants.) The Federal Government also announced in its 1973-74 Budget the decision to abolish tuition fees.

Prior to 1972-73 Federal Government grants for colleges of advanced education and for teachers' colleges were provided under separate programs, but since then they have both been absorbed into a wider program of grants for advanced education.

## FEDERAL GOVERNMENT ACTIVITIES IN EDUCATION

### Introduction

The Federal Constitution gives the Federal Government responsibility for providing educational services in the Australian territories while leaving state governments with responsibility for the provision of educational services within their state boundaries.

In recent years the Federal Government has provided the state governments with substantial financial assistance specifically for schools, universities, colleges of advanced education and technical colleges. In addition, the Federal Government has administered Australia-wide schemes of financial assistance for students for many years.

The Federal Government first became directly involved in education when it established an Office of Education in 1945 and a branch was opened in Hobart. However, education remained a state responsibility—the principal functions of the Federal Government's Hobart office were migrant education and administration of Federal Government university scholarships. In 1951 the Hobart office was closed and its functions were transferred to the Tasmanian Department of Education which acted as an agent for the Federal Government. With increased financial involvement in education the Hobart Office was re-opened in 1964. However, education was still primarily a state responsibility.

The portfolio of the Federal Minister for Education is composed of the Department of Education, the Tertiary Education Commission (assisted by the Universities Council, the Advanced Education Council and the Technical and Further Education Council), the Schools Commission, the Curriculum Development Centre, the Commonwealth Teaching Service and the Australian Capital Territory Schools Authority. The Office of Child Care, which advises the Government on support for child care and pre-school education programs, is located within the Department of Social Security.

### Department of Education

The Department provides advice to the Federal Minister for Education on general educational policy measures and the development and investigation of educational policy proposals in new areas. It is involved in the planning and evaluation of the effective use of resources in Australian education and co-ordinates programs of advisory commissions and committees.

The Department advises the Federal Government on policy for furthering educational research. It undertakes educational research projects and provides the secretariat for the Education Research and Development Committee. The Committee advises the Minister on priorities in educational research, recommends the award of research grants and assists in the training of research personnel.

The Department is responsible for international relations in education, for example for co-ordinating Australian participation in the educational activities of UNESCO and OECD. It administers schemes of assistance for Australian students and also exchange programs which enable Australians to study overseas and overseas students and educationists to visit Australia. The Department is also responsible for the production of language teaching materials, provides advice on Aboriginal education and provides administrative assistance for a number of advisory committees, including the Australian Council on Awards in Advanced Education.

Secretariat services are provided to a number of advisory bodies including the following:

*Australian Council on Awards in Advanced Education:* The Council was established in 1971 to promote consistency in the nomenclature used for awards in advanced education and in establishing consistency between the courses and their associated awards.

*Education, Research and Development Committee:* This Committee was established in 1970 to advise the Minister on priorities in educational research, to recommend the award of research grants and to propose measures for the training of research personnel. The first of the Committee's awards of Educational Research Scholarships and Educational Research Fellowships were made in 1975.

### *Federal Government Assistance for Tertiary and Secondary Students*

The next table shows the number of students in Tasmania who received Federal Government assistance under the various schemes for recent years:

Number of Students in Tasmania Receiving Federal Government Assistance at 30 June

Scheme	1974	1975	1976	1977	1978	1979
Tertiary education assistance	1 460	1 668	1 770	1 773	1 797	1 455
University .....	-	-	-	-	-	-
Advanced education .....	-	-	-	-	-	-
Technical .....	29	12	2	-	-	-
Secondary .....	2	-	-	-	-	-
Adult secondary .....	-	37	39	64	56	57
Senior secondary .....	1 341	670	2	-	-	-
Secondary allowances .....	164	200	260	298	377	366
Post-graduate .....	50	54	54	51	44	44
Aboriginal secondary .....	241	313	316	300	300	292
Aboriginal study .....	16	11	15	12	22	30
Isolated children .....	603	806	731	688	625	568
Other .....	37	23	9	-	-	-
Total .....	3 943	3 794	3 198	3 186	3 221	2 812

Brief descriptions of the various schemes are given below:

**Tertiary Education Assistance Scheme:** This scheme provides means-tested (non-competitive) allowances to full-time, unbonded students attending approved courses at tertiary institutions. Benefits in 1980 included an allowance, subject to a means test, of up to \$1 250 per year for a dependent student (i.e. those under 25 and unmarried) living with his parents; up to \$2 075 per annum for a dependent student living away from home; and up to \$2 348 per annum for an independent student. Dependent students receive an additional \$5.25 per week representing a transfer of the average family allowance payment to the student. Dependants' allowances of \$31.40 per week for a dependent spouse and \$7.50 per week for each dependent child were payable. Also provided are allowances to assist with student union and other incidental fees. The following incidentals allowances were payable in 1980: for students enrolled at universities, \$100; for students at colleges of advanced education, \$70; and for students at technical colleges, \$30.

**Adult Secondary Education Assistance Scheme:** Assistance is available under this scheme for students, aged 19 years or more on January 1 of the year of study, who have had a break from secondary studies and who have returned to undertake final year secondary or matriculation studies full-time at secondary schools, technical colleges and other approved institutions. Benefits payable are the same as those provided under the Tertiary Education Assistance Scheme.

**Secondary Allowances Scheme:** Families with limited financial resources are assisted under this scheme to maintain their children at school for the final two years of secondary education. In 1980 an allowance of up to \$550 per year was provided on a non-competitive basis subject to family income.

**Post-graduate Awards:** Awards are made annually to enable students to undertake post-graduate studies at an Australian university or college of advanced education. In Tasmania, in 1980, 16 new awards were made available. Selection is made on the basis of ranking by each institution and in the case of Course Awards and advanced education institutions awards, the final order of merit list is drawn up by a Central Selection Committee. The award, subject to annual renewal, may be held for a maximum of four years in the case of a doctorate degree candidate or two years in the case of a master's candidate. In 1980 award holders received a living allowance of \$4 200 per year. Provision is also made for assistance with travel, establishment and thesis costs and married award holders may qualify for an allowance in respect of dependants (spouse and children). Allowances are taxable.

**Aboriginal Grants Schemes:** The Department of Education administers two schemes of assistance for students of Aboriginal descent—the Aboriginal Study Grants Scheme and the Aboriginal Secondary Grants Scheme. Aboriginal study grants assist Aboriginals to undertake training and study after leaving school and provide the full-time student with fees and a living allowance. In 1980 married students or students 18 and over received \$57.27 per week, while unmarried students under 18 received \$47.25 per week. Dependent students received an additional \$5.25 per week representing a transfer of the average family allowance

payment to the student. Other special allowances were also payable, including some benefits to part-time students. The Aboriginal Secondary Grants Scheme provides assistance to Aboriginal secondary school students to encourage them to obtain a secondary education. The scheme provides a living allowance which, in 1980, was \$308 per year for students in junior grades and \$440 for senior students. Allowances are also payable for the cost of board, textbooks, uniforms, fares, fees and other items.

*Assistance for Isolated Children:* This scheme provides financial assistance to enable children living in isolated areas to have access to schooling in the appropriate grade or year. In 1980, a boarding allowance of up to \$1 550 per child per year was payable in respect of children living away from home to attend school. Where a family, in preference to boarding its children away from home, maintained a second home to enable the children to attend school on a daily basis, a second home allowance of between \$500 and \$1 275 per year was paid, depending on the number of children involved. For children who studied by correspondence, an allowance of up to \$500 per child per year was payable.

*Commonwealth Teaching Service Scholarship Scheme:* This scheme provided competitive awards to students undertaking full-time courses of teacher education with the intention of becoming teachers in the A.C.T. or the Northern Territory. In August 1978, the Government announced its decision to phase out the scheme and no new awards were granted in 1979.

*National Aboriginal Education Committee:* This Committee was established in March 1977 to advise the Commonwealth Minister for Education and his Department on the educational needs of Aboriginal people and the most appropriate ways of meeting these needs. The National Aboriginal Education Committee is an all-Aboriginal committee of nineteen members who come from all states, including Tasmania as well as the Torres Strait Islands.

### **Adult Migrant Education Program**

The Department of Immigration and Ethnic Affairs, in association with the Adult Migrant Education Service of the Tasmanian Division of Further Education, offers Statewide opportunities for free English language training. Education services commenced in 1947 and since 1951 the program has been funded by the Federal Government and administered by the State authorities.

The education program offers learning opportunities as part of on-arrival provision for newly-arrived migrants and refugees. A variety of on-going programs are offered for those who have been in Australia for longer than six months.

On-arrival courses cover the Australian way of life, including institutional arrangements, community services, cultural aspects and information to assist orientation and settlement. Apart from the range of full-time and part-time English courses, special arrangements include a correspondence program, courses at the work place, The Home Tutor Scheme and special informal classes for migrant women. Persons enrolled in the ten-week full-time courses may be eligible for a living allowance equivalent to the unemployment benefit.

The level of the courses, length of time over which a course is offered and the appropriate education arrangements depend on language learning needs of the client group, their personal circumstances and educational background. The Education Section of each Regional Office of the Department of Immigration and Ethnic Affairs is responsible for making arrangements with State Adult Migrant Education authorities to provide the best possible learning opportunities for people in various locations.

During the 1979-1980 financial year 141 students were enrolled in full-time English courses in Hobart, Launceston and Burnie; 459 in part-time day and evening courses, and 41 in correspondence courses. The Home Tutor Scheme using 118 volunteer tutors teaching English on a one-to-one basis, usually in the migrants' homes, attracted 148 students throughout the year.

### **Office of Child Care**

The Office of Child Care within the Department of Social Security was established in June 1976 to administer programs of assistance which provide for the care and development of young children before they reach school age, and of older children outside school hours.

By supporting a variety of programs carried out both through state governments and by local governments and community groups, the Office of Child Care aims to help families provide adequately for the needs of their children.

The Office also aims to provide a comprehensive integrated approach to children's services which will include day-care centres, family day-care programs, play-groups, after school and holiday care programs, occasional care and emergency care, youth support and family support services with the priority on high need groups in the community. The emphasis is on providing services to help people join together to make the best use of existing facilities for children.

### **The Australian Schools Commission**

The Schools Commission was created by the Federal Government as a statutory body under the *Schools Commission Act 1973*. The Commission was preceded by the Interim Committee for the Australian Schools Commission, chaired by Professor Peter Karmel. The Interim Committee reported to the Federal Government in May 1973 in a Report entitled 'Schools in Australia', the major recommendations of which were accepted by the Government. As a result of this Report, funding for Australian schools for 1974 and 1975 was made available by the Federal Parliament which enacted the *States Grants (Schools) Act 1973*. Other Federal Government funds continued to be available under the *States Grants (Schools) Act 1972*. Supplementary grants were made in subsequent amendments to both Acts.

In broad terms, the functions of the Commission are:

- (i) To report to the Federal Minister of Education, after consultation with interested parties, on the needs of primary and secondary schools and on the priorities that should be given to satisfying those needs.
- (ii) To inquire into and report on important aspects of primary and secondary schooling, with a view to improving the quality of education and the efficient use of resources.
- (iii) To carry out, in conjunction with various schools and school systems, studies aimed at finding solutions to educational problems.

### **State Planning and Finance Committee**

The functions of the State Planning and Finance Committee are to:

- (i) Supervise the distribution to non-government schools of Federal Government grants within the State and in particular to recommend subsidy levels for non-systemic schools and report regularly to the Schools Commission on the application of the needs principle in the distribution of block subsidy grants for Catholic systemic schools.
- (ii) Establish priorities based on need and approve applications for building grants from non-government schools.
- (iii) Make recommendations on non-government schools seeking to be declared as disadvantaged for the purposes of the Disadvantaged Schools Program.
- (iv) Advise the Commission on matters affecting the financing and development of non-government schools, and on other matters as referred by the Commission from time to time.

Members are appointed by the Federal Minister for Education with the aim of achieving broadly representative committees in each state competent to make decisions on priorities and levels of funding in individual schools.

### **State Innovations Committees**

State and Territory Innovations Committees were appointed for the calendar year 1980 by the Minister, each having eight members. They were required to report and make recommendations to the Commission through the National Innovations Committee. They were to be responsible for monitoring and administering support functions at the state level for funded projects as directed by the Commission.

### **Programs and Funding for 1980**

The following table shows the grants allocated for the 1980 programs:

**Schools Commission: Financial Allocations for 1980 (a)**  
(\$'000)

Program	Tasmania	All states
Government schools—		
General recurrent grants .....	6 419	206 714
Migrant education .....	387	22 721
Disadvantaged schools .....	395	19 085
Special education .....	447	12 450
Capital grants .....	3 029	92 722
Total .....	10 677	353 692
Non-government schools—		
General recurrent grants—		
General support .....	5 821	260 738
Emergency assistance .....	—	574
Migrant education .....	18	9 879
Disadvantaged schools .....	60	2 957
Special education .....	—	447
Capital grants .....	570	27 859
Total .....	6 469	302 453
Joint programs—		
Multicultural education .....	44	1 397
Disadvantaged country areas .....	287	5 159
Special education .....	44	1 409
Services and development .....	347	11 712
Education centres .....	—	1 472
Special projects .....	—	3 096
Total .....	721	24 244
Total all programs .....	17 866	680 388

(a) At June 1979 price levels.

The Commission operated eight programs during 1980. The programs and Tasmania's share of the funds are summarised below:

**General Recurrent Grants Program:** In Tasmania, government schools were allocated \$6.4 million and non-government schools an estimated \$5.8 million in 1980. Grants under this program are allocated to cover staffing and other running costs, including teaching materials and property maintenance.

The levels of assistance to which a school may be entitled are shown in the following table. (In the case of Catholic and Seventh Day Adventist systemic schools a block subsidy grant at one of these levels is given to cover all schools in the system.)

**Per Capita Grant Rates: Non-Government Schools, Tasmania, 1980**  
(\$)

Subsidy level	Amount per primary school student	Amount per secondary school student	Subsidy level	Amount per primary school student	Amount per secondary school student
1	176	263	4	264	404
2	220	334	5	308	474
3	220	351	6	374	562

**Migrant Education Program:** In 1980, \$32.6 million was allocated nationally to meet the special need of students whose first language is not English and to support changes in schools which give recognition to other languages and cultures. Government schools were allocated \$387 000 and non-government schools \$18 000 in Tasmania.

**Multicultural Education Program:** In 1980, the second year of this program, available funds were nearly tripled over the 1979 total in accordance with the 'Galbally Report' recommendations. An amount of \$1.3 million was allocated nationally to support three areas of activity, being general multicultural projects, small grants projects and ethnic schools liaison officers. In addition, \$108 500 was provided to support projects of particular significance to Australian education. Tasmania was allocated \$34 500 to be used jointly in both government and non-government schools for the three activity areas.

**Disadvantaged Schools Program:** \$22.0 million was allocated nationally in 1980 to provide additional help to schools declared as disadvantaged due to such factors as socio-economic background, ethnic origin or geographic location. Tasmania's allocation was \$455 000 comprising \$395 000 for government schools and \$60 000 for non-government schools. An additional \$5.2 million was allocated nationally for disadvantaged country areas; Tasmania's allocation was \$287 000.

**Services and Development Program:** For 1980, \$11.6 million was allocated nationally for teacher development, support services and staff replacement. In addition \$108 500 was allocated for the schools travel and exchange scheme and \$1.5 million for education centres. Tasmania was allocated \$346 500 for teacher development and associated activities.

**Special Education Program:** \$12.9 million was allocated nationally in 1980 to improve the quality and coverage of educational services for handicapped children. Tasmania was allocated \$446 500 for use in government special schools and education units. An additional \$1.4 million was allocated nationally to help residential institutions with projects that support school education and provide opportunities for a broad program of experience outside the institution. Tasmania's allocation was \$43 500.

**Special Projects (Innovations) Program:** \$3.1 million was allocated nationally in 1980 in response to initiatives by those concerned with creative change in primary and secondary education. Offers of grants are made to individual applicants on merit. The small grants scheme continued to provide a fast response to people seeking grants up to \$1 000 for small-scale practical and innovative ideas. Funds from the program are also allocated to support a broad range of activities which are considered to be projects of national significance.

**Capital Grants Program:** In 1980, \$120.6 million was allocated nationally for building and equipment projects, including refurbishing and upgrading in both government and non-government schools. In Tasmania, government schools were allocated \$3 million and non-government schools \$569 500 under this program in 1980.

### Tertiary Education

#### *The Tertiary Education Commission*

In April 1977 the *Tertiary Education Commission Act* was passed by Federal Parliament and established the Tertiary Education Commission. The Commission which commenced operation on 22 June 1977, replaced the three previously existing tertiary commissions—the Universities Commission, the Commission on Advanced Education and the Technical and Further Education Commission.

The role of the Tertiary Education Commission is to develop and recommend policies for Federal financial support to the states across the range of post-secondary institutions. Under its Act, the Commission is required to perform its functions with the object of promoting the balanced and co-ordinated development of the provision of tertiary education in Australia and the diversification of opportunities for tertiary education. The Commission is assisted in its work by three statutory councils: the Universities Council; the Advanced Education Council; and the Technical and Further Education (TAFE) Council.

#### *Funding of Tertiary Education*

**Universities and Colleges of Advanced Education:** Federal Government assistance to the states for the recurrent expenditure of universities dates from 1951-52. Grants were then made on a matching basis (one dollar for each \$1.85 of state expenditure). Assistance for capital purposes was provided on a dollar-for-dollar basis. Assistance to the states for colleges of advanced education commenced in March 1965 when the Federal Government agreed, as an interim measure, to make capital grants totalling \$5 million during the remainder of the 1964-66 triennium. Grants for recurrent expenditure of colleges were made from the beginning of the 1967-69 triennium. The formula for matching both capital and recurrent

grants for colleges with state expenditure was similar to that applied in the case of universities. As from 1 January 1974, the Federal Government assumed full financial responsibility for both universities and colleges of advanced education.

**Technical and Further Education:** The Federal Government first became involved in the provision of grants for technical and further education (TAFE) in 1964, when a scheme of unmatched capital grants to the States was introduced. These grants continued under the *States Grants (Technical Training) Acts* to 30 June 1974. The Federal Government, acting on the recommendations of the Australian Committee on Technical and Further Education (ACOTAFE), then introduced grants for TAFE recurrent expenditure while continuing its financial support for TAFE capital purposes. These grants have been provided under the *States Grants (Technical and Further Education) Act* 1974, the *States Grants (Technical and Further Education Assistance) Act* 1976 and the *States Grants (Tertiary Education Assistance) Act* 1978. Under this last Act, for calendar year 1980, Tasmania was allocated grants of \$4.2 million for TAFE capital purposes (at December 1979 prices) and \$2 million for TAFE recurrent purposes (at December 1979 prices for the non-salary component and at March 1980 prices for the salary component).

The following table sets out Federal Government payments to Tasmania for university education, advanced education and technical and further education for recent years:

**Federal Government Payments to Tasmania for Tertiary Education**  
(\$'000)

Sector	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
University—						
Recurrent(a) .....	12 274	r 13 658	16 427	18 057	18 864	20 832
Capital .....	1 279	2 589	573	456	790	313
Advanced Education—						
Recurrent .....	6 888	7 011	8 678	r 9 256	9 436	10 068
Capital (b) .....	2 969	5 313	404	r 1 598	3 221	810
TAFE—						
Recurrent .....	426	1 087	969	1 110	1 673	2 005
Capital (b) .....	471	887	r 1 664	1 970	394	3 400

(a) As from 1 July 1976, equipment grants for universities have been included in recurrent grants.

(b) Includes grants for equipment.

## STATE LIBRARY OF TASMANIA

### General

The State Library of Tasmania was created in 1943 under the *Libraries Act* 1943 from the former Tasmanian Public Library which was formed 1849. The purpose of the State Library is to provide a comprehensive library and information service to all sections of the Tasmanian community.

### Information Services

A primary role of the State Library is the collection and dissemination of information. In earlier times libraries were seen as repositories of knowledge (information). However, in the 1980s libraries are required not merely to collect but to be expert, objective dispensers of information. The middle decades of the present century have been associated with remarkable changes in the creation of new information as part of the social and economic developments which have occurred. For some years libraries have had to cope with substantial increases in the range and depth of new printed information. During the 1970s libraries began to adapt to the new concepts of information retrieval which computer and communications technology now allows.

The State Library serves the State as a major source of information. It was one of the first public libraries in Australia to provide on-line information access as a normal part of its reference services. In 1977 the State Library installed its first visual display unit as part of the



inauguration of the AUSINET computer-based Australian information network. In 1979 a second terminal allowed on-line searching of the large array of North American data bases available on Lockheed Aircraft Corporation's DIALOG system and System Development Corporation's ORBIT.

These tools have enabled the Library to significantly improve its capacity to provide information services in science and technology. Most of the use made of DIALOG has been for government departments and agencies, and for people in business and industry who are involved in establishing new enterprises or in extending and improving existing ones.

Within Tasmania the State Library has inaugurated a computer based community information index (TICO) and co-operates widely with other community, business and government organisations. The Library's information service extends to all parts of the State through the regional framework outlined below. The State Library is also actively planning the improvement of information services to government agencies and is developing its support for the school and college library network. It works closely with the libraries at the TCAE and the University of Tasmania and has extensive links with libraries on the Australian mainland and overseas.

### *Organisation*

**Headquarters:** The State Library headquarters is located in central Hobart. The following major functions are provided from the headquarters:

**Reference and Information Services:** The State Reference Library co-ordinates information services throughout the system. Special attention is given to the needs of research workers in both the public and private sector. A large collection of directories, indexes, abstracting tools and computerised data bases are available in addition to the holdings of books, periodicals, newspapers, maps and other items.

**Resources Division:** Controls the selection, acquisition and disposition of all materials throughout the State Library system in close consultation with specialist and regional staff.

**Technical Services:** Responsible for the acquisition, cataloguing and classification of all materials added to the State Library. Extensive use is made of computer technology in both the Resources and Technical Services fields.

**Hobart Lending Library:** Provides a book lending service for adults and children.

**Performing Arts Collection:** Contains over 6 900 films and approximately 200 000 records and cassette tapes. Films and records are available for borrowing by individuals and organisations.

**Government Department Libraries:** The State Library assists and co-ordinates the provision of an information service to government agencies.

**Archives Office:** Under the *Archives Act* 1965, the State Library is the official repository for all official State Government records. A considerable quantity of private records of individuals, companies, associations, societies and institutions is held in addition to official records.

**Special Collections:** The State Library houses unique collections of books and documents relating to Tasmania. These collections include: (i) the Tasmanian Collection—a definitive collection of books published in Tasmania; (ii) the W.L. Crowther Library—a large research collection of books, pamphlets and other items relating to Tasmania and Australia; and (iii) the Allport Library and Museum of Fine Arts—comprising a collection of antique furniture, china, glass, silver, pictures, prints and rare books in fine editions.

**Parliamentary Library:** A legislative reference service is provided to both Houses in association with the Parliamentary Library Committee.

**Channel Regional Library System:** This serves 23 000 people centred on Kingston from a temporary central library.

**Derwent Regional Library System:** serves 66 000 people centred on Glenorchy. A new central building for the region opened in January 1979.

**Hellyer Regional Library System:** serves 61 000 people in the north-west and west coast from a modern central building in Burnie.

**Mersey Regional Library System:** serves 44 000 people in the central north coast from temporary premises in Devonport. A site for a new central library has been selected and architectural planning has commenced.

*Northern Regional Library System:* serves 110 000 people from a modern central library in Launceston.

*Tasman Regional Library System:* serves 52 000 people in eastern Tasmania from temporary premises at Bellerive. A site for a regional headquarters building is under investigation.

The following table shows the distribution of branch libraries, depots, book-mobiles and books held throughout these regions and in the State Headquarters:

**Public Libraries: Tasmania, 30 June 1980**

Regional system	Buildings			Book-mobiles	Books held ('000)
	Central Library	Branch Library	Depots(a)		
State Library Headquarters .....	1	—	—	3	538.1
Channel Region .....	—	6	—	—	64.4
Derwent Region .....	1	15	1	—	134.0
Hellyer Region .....	1	14	—	1	165.8
Mersey Region .....	—	6	1	—	59.0
Northern Region .....	1	22	9	3	236.6
Tasman Region .....	—	9	1	—	95.9
<b>Total .....</b>	<b>4</b>	<b>72</b>	<b>12</b>	<b>7</b>	<b>1 293.8</b>

(a) Comprises a small collection of materials not housed in a separate library building or room.

### *Expenditure*

The following table shows the main expenditure items for the State Library Department for recent years:

**State Library Department Expenditure, Tasmania (\$'000)**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Salaries and pay-roll tax ...	1 703	2 105	2 599	3 067	3 540	3 896
Purchase of books, etc. ....	588	665	790	910	893	1 046
Other .....	471	1 067	725	893	1 211	1 279
<b>Total expenditure</b>	<b>2 762</b>	<b>3 837</b>	<b>4 114</b>	<b>4 870</b>	<b>5 644</b>	<b>6 221</b>

### *School and College Libraries*

The Library Services Branch of the Education Department of Tasmania is also housed in the State Library building. This Branch, previously known as the Education Division, is responsible for: (i) developing effective library support services to schools and colleges and to adult education; (ii) consultancy and advisory services on library matters in all educational areas; and (iii) maintaining liaison with all appropriate branches of the Education Department.

The Branch is engaged in the planning of new libraries, conduct of in-service education programs, professional advice to teachers and teacher-librarians, preparation of library funding programs, operation of central cataloguing services and provision of resource evaluation information.

A major function of the Branch is to co-ordinate with the State Library the development of state-wide library services in a co-operative network, especially in the area of technical services such as acquisitions, cataloguing and circulation control. It also has a major objective to develop resource-sharing networks based on the State Library's regional structure.

Libraries under the control of professional teacher-librarians have been established in 151 schools and colleges of the Education Department and in several non-government schools. Advisory services are available to all of the approximately 300 schools and colleges in

the State. The resource-buying budget in this area is well in excess of \$500 000 per annum and is being supplemented by the establishment of regional pool collections of learning and teaching resources.

## CULTURAL ACTIVITIES

### Tasmanian Museum and Art Gallery

#### *History*

The Tasmanian Museum and Art Gallery has its origins in early scientific groups formed in Hobart Town in the 1820s and 1830s. In 1853 the Royal Society of Tasmania established a museum which was later vested in a Government Board of Trustees in 1885. The first building on the present site, on the corner of Argyle and Macquarie Streets, was designed by the city's best-known colonial architect, Henry Hunter (1832-1892), and completed in 1863. Later additions were made in 1889, 1901, 1966 and 1979. The income of the Museum is provided mainly by an annual grant from the State Government.

#### *Activities*

The Tasmanian Museum and Art Gallery houses collections in the fields of fine and applied art, zoology, geology, botany, history, anthropology and applied science. It is an integrated institution concerned with the whole range of natural and human heritage with particular emphasis on Tasmanian exhibits.

The Museum's traditional function, and still the major part of its operation today, is to collect, conserve, study and display items of cultural or scientific value to the community. It now performs a wide variety of additional roles, which include a continuing program of travelling exhibitions and a school education service which utilise the *Musbus*, a van, specially equipped for transporting museum displays.

Curators, in addition to working on collections and research on related subjects, handle public inquiries which touch on their fields. Display staff are responsible for installing museum displays, publicity and museum publications. The Museum also employs experts in art conservation and taxidermy. The Tasmanian Herbarium, currently housed in the Botany Department of the University of Tasmania, is part of the Museum.

#### *Collections*

**Art:** The Gallery has a comprehensive collection of Australian paintings, drawings, prints and some sculptures from the early nineteenth century to the present day. The collection places particular emphasis on Tasmanian art of the colonial period, with large groups of paintings by Glover, Duterrau, Bull, Gould, Skinner, Prout and others. There are also some important European paintings, prints and sculptures of the nineteenth and early twentieth centuries, including works by Beechey, Bouguereau, Poynter, Rodin and Epstein. The collection of eighteenth and nineteenth century English watercolours is one of the largest in Australia. The Gallery also collects nineteenth and twentieth century international prints and recent international photographs.

The applied arts collection includes nineteenth century European and Australian costumes, silver, china and glass and a collection of contemporary Australian ceramics and works in metals and fibres. Asian material includes a collection of jade carvings and Japanese netsuke.

**History:** The presentation of Colonial history is highlighted by articles such as Andrew Bent's press of c.1825 and Lady Franklin's sedan chair (c.1840), and by a comprehensive maritime (including whaling) collection. A photograph collection covers the period from the mid-1850s to the present day. Coins and medals, including a collection of Greek, Roman and early British coins, and early time-pieces are other notable historical collections.

**Anthropology:** Tasmanian Aboriginal culture is represented by tools and artifacts, and stone carvings from Mount Cameron West in north-western Tasmania. There is a Melanesian collection assembled earlier this century, and representative Australian material.

**Zoology:** Present displays of vertebrate animals feature Tasmania's land mammals and birds, together with reptiles and marine life. Tasmanian invertebrates on show include insects, spiders, crabs, mollusc shells and sea stars. An extensive reference collection of Tasmanian animals is maintained for scientific study. The Museum safeguards many type specimens (original examples on which description of new species have been based).

**Geology:** Rocks, minerals and fossils of predominantly Tasmanian origin are on display. Notable exhibits include the skeletons of *Wynyardie*, the 20-million-year-old marsupial from Wynyard, and *Zygomaturus*, a giant marsupial, the Chidley Mineral Collection and the world-famous mineral crocoite from Tasmania's west coast. The reference collection houses rocks and minerals, including the Petterd Mineral Collection, and fossils, which include many type specimens, mostly from Tasmania.

**Botany:** The Herbarium is at present housed at the University of Tasmania. It includes specimens collected early in Tasmania's history by R. C. Gunn, many of which are type specimens. Other early collectors represented include Archer, Meredith, Milligan, Stuart and Spicer. The Herbarium's current holdings number about 90 000 specimens of Tasmanian plants.

### Queen Victoria Museum and Art Gallery

The Queen Victoria Museum and Art Gallery was established by the Tasmanian Government in 1891. Since 1895 it has been vested in the Launceston Corporation and has received an annual State Government grant. It serves the northern half of Tasmania and its 14 public galleries contain collections and exhibits of special relevance to the natural and cultural environment of Tasmania. Educational, research and information services are provided. The Museum is regularly patronised by local, interstate and overseas researchers and sightseers.

The Museum operates a Zeiss Medium-type Planetarium seating 66 people in a comfortable, air-conditioned auditorium beneath a celestial dome eight metres in diameter. Various sessions are conducted for the general public and for school groups. It has its own air-conditioned theatre seating 166 people and a reference library of scientific and historical books and journals. The arms and armour collection is one of the finest in Australia and there are also extensive collections of Tasmanian animals, plants, artifacts, geological specimens, historical material, craft, decorative art and fine art.

The education office of the Queen Victoria Museum and Art Gallery provides a service to schools throughout northern Tasmania, loaning a wide range of items for teaching aids and assisting with teaching programs in the public galleries. In 1979, with the assistance of the Australian National Railways Commission, a rail car was fitted out to display Museum materials and this will be stationed for short periods at various towns serviced by rail in northern Tasmania. Though primarily designed as a teaching aid for district schools, it is also open to the general public.

In addition to the Director there are five curatorial staff and fourteen other staff members. Research is undertaken both in the field and in the institution. The results of such programs are regularly published in the Museum's own journal, *Records of the Queen Victoria Museum*, and other research publications.

### The Performing Arts

The organisation and presentation of the performing arts in Tasmania has been subject to a process of continual change. During the early 1970s, four performing arts companies were set up and subsequently funded by both Federal and State Governments. They were the Tasmanian Theatre Company, Tasmanian Opera Company, Tasmanian Ballet Company and Tasmanian Puppet Theatre. However, by 1976 it was apparent that the maintenance of full-time drama, opera and dance companies in Tasmania was not feasible considering the subsidies available and the population of the island.

In 1977, the Tasmanian Theatre Company adopted an entrepreneurial role by promoting tours of Tasmania by other theatrical companies from Australia and overseas. In 1978, following the termination of the Tasmanian Opera Company and the discontinuance of Federal Government grants to the Tasmanian Ballet Company, the Tasmanian Theatre Company widened its theatrical interests, to include music and dance in its presentations. In 1979, following an initiative from the Minister for the Arts, the Tasmanian Theatre Company co-ordinated and promoted a full 12-month program of drama, opera and dance in Tasmania.

The Tasmanian Ballet Company currently presents a program mainly for schools in Tasmania and Victoria. In 1976 the Tasmanian Theatre Company's youth activities became a separate identity and now operates as the Salamanca Theatre Company, presenting a theatre-

in-education program throughout the State. The Tasmanian Arts Council is an entrepreneurial body mainly involved in operating a touring program to schools and decentralised areas.

### Music

The Australian Broadcasting Commission maintains the Tasmanian Symphony Orchestra which is resident at the Odeon Theatre, Hobart, the only concert venue owned by the ABC in Australia. The Tasmanian Symphony Orchestra presents concert series for adult and youth audiences, special performances for schools and accompanies visiting professional opera companies. In 1979 the Orchestra accompanied the Australian Ballet in performances in Greece and Israel.

Musica Viva presents a comprehensive chamber music program at the University Centre, Hobart and a smaller program in the north and north-west of the State.

Professional training is offered at the Conservatorium of Music. Artists in residence at the Conservatorium form the Petra String Quartet which tours Tasmania and the mainland encompassing the school, college, conservatorium and university circuits.

### Funding Bodies

Funds are made available to performing arts organisations through the Theatre, Music and Community Arts Boards of the Australia Council and through the Tasmanian Arts Advisory Board. The Tasmanian Arts Advisory Board consists of up to 12 members and a Chairman appointed by the Tasmanian Minister for the Arts.

### Theatres

*Theatre Royal, Hobart:* This theatre, which opened in 1837, is the oldest theatre in Australia. There are three levels of audience seating: stalls, dress circle with two boxes and upper circle, with a total capacity of 703. Finance available from Federal and State Governments over the last eight years has enabled extensive maintenance to be done and backstage additions, including new dressing rooms, office facilities and a new heating system, have been commenced. The Theatre Royal is managed by the Theatre Royal Board which is appointed by the Tasmanian Government.

*Princess Theatre, Launceston:* This is the largest theatre in Tasmania, seating 1 072 on two levels—stalls and dress circle. It was built for live theatre in 1911, and was also used extensively as a cinema for many years. In 1970 it was purchased by the Launceston City Council and renovated as a live theatre with modern dressing rooms and facilities. Extensions and alterations since then include the installation of a full counterweight system and interior decoration. The Princess Theatre is managed by the Launceston City Council.

*Civic Centre, Burnie:* This is a new complex built by the Burnie Council and completed in 1976. It features an art gallery and a theatre. The auditorium of the Civic Theatre seats 418 on one level.

### Further References

#### *ABS Publication Produced by the Tasmanian Office*

Education, Tasmania (4201-6) (annual, 1979 released 26-9-80, 33 pp.)

#### *ABS Publications Produced by the Canberra Office*

School Enrolments, Australia (Preliminary) (4201-0) (annual, 1980 released 27-1-81, 5 pp.)

Schools, Australia (4202-0) (annual, 1979 released 7-10-80, 41 pp.)

Colleges of Advanced Education, Australia (Preliminary) (4205-0) (annual, 1980 released 17-10-80, 8 pp.)

Colleges of Advanced Education, Australia (4206-0) (annual, 1979 released 10-12-80, 62 pp.)

University Statistics, Australia (Preliminary) (4207-0) (annual, 1980 released 3-9-80, 10 pp.)

University Statistics, Part 1: Students (4208-0) (annual, 1978 released 31-10-79, 46 pp.)

University Statistics, Part 2: Staff and Libraries (4209-0) (annual, 1978 released 6-8-79, 23 pp.)

Education Experience and Intentions Survey, Australia (Preliminary) (4211-0) (Sole issue, 1979, released 21-10-1980, 6 pp.)

Expenditure on Education, Australia (5510-0) (annual, 1978-79 released 3-11-80, 9 pp.)

#### *Other Publications*

Annual Reports of the Education Department, Tasmania (Government Printer, Hobart)

## Chapter 15

### SOCIAL WELFARE AND HEALTH SERVICES

#### WELFARE

##### Introduction

In Australia, the principal social welfare benefits are provided by the Federal Government under the *Social Services Act 1947*, as amended, which is administered by the Federal Department of Social Security. Finance for the benefits is provided from the National Welfare Fund which is augmented each year from the Consolidated Revenue Fund by an amount equal to the payments made.

State social welfare, which covers child welfare and relief, is administered by the State Department of Social Welfare.

#### Federal Department of Social Security

The following table shows expenditure in Tasmania from the National Welfare Fund on benefits under the *Federal Social Services Act*:

Social Security Payments Under the Social Services Act, Tasmania  
(\$'000)

Benefit or service	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Age and invalid pensions (a) . . . . .	60 118	77 976	91 788	107 203	117 678	127 382
Widows' pensions . . . . .	8 521	11 221	12 455	14 660	16 621	18 844
Supporting parent's benefit (b) . . . . .	2 819	4 742	5 578	6 573	7 494	8 301
Maternity allowances . . . . .	229	215	215	213	(c) 91	—
Family allowances (d) . . . . .	7 099	8 266	31 197	30 968	(e) 28 924	30 549
Handicapped child's allowance . . . . .	45	197	345	385	407	481
Double orphan's pension . . . . .	43	43	66	52	54	57
Unemployment benefits . . . . .	7 746	15 526	17 963	23 398	28 609	29 665
Sickness benefits . . . . .	1 692	2 409	2 380	2 385	2 024	2 299
Special benefit . . . . .	421	811	979	804	1 299	1 487
Rehabilitation services (f) . . . . .	386	440	r 526	461	519	805
Sheltered employment allow- ances . . . . .	41	269	474	637	745	1 064
Funeral benefit . . . . .	44	41	43	43	39	42
Total . . . . .	89 207	122 157	164 011	187 782	204 507	220 976

(a) Includes wives' pensions.

(b) Prior to November 1977, benefit was payable to supporting mothers only.

(c) Payments in respect of births occurring prior to 1 November 1978.

(d) Family allowances replaced child endowment and student endowment from July 1976.

(e) Payments effected by change in eligibility of students receiving payments from Commonwealth education schemes and rescheduling of payment dates associated with the change from four weekly to monthly payments.

(f) Payments for 1974-75 include \$16 330 paid in respect of the Training Scheme for Widow Pensioners.

Federal activity in social services began with the passage of the *Federal Invalid and Old Age Pensions Act 1909*. This and the *Maternity Allowances Act* were administered by the Department of the Treasury until 1941 when the Department of Social Services commenced to function as a separate organisation. Later, the functions of the Department were widened with the passing of the *Child Endowment Act*, the *Widows' Pensions Act* and the *Unemployment and Sickness Benefits Act*. A referendum held in 1946 empowered the Federal Government to legislate for the provision of certain social services formerly provided by the states. In 1947, a consolidated *Social Services Act* was passed. Other major Acts administered by the Department include the *Aged or Disabled Persons Homes Act 1954*, the *Handicapped Persons Assistance Act 1974*, and the *Homeless Persons Assistance Act 1974*.

### Pensions and Benefits

Social Security benefit rates which applied as the result of recent legislation are set out in the next table:

**Social Security Benefits, 1979 and 1980: Maximum Rates, Tasmania**  
(**\$ Per Week Unless Noted as Monthly Payments**)

Benefit	1979 Amending legislation (November)	1980 Amending legislation (May)
Age and invalid pensions and sheltered employment allowances—		
Single person .....	57-90	61-05
Single person with dependent child or children (a) .....	61-90	65-05
Married couple (both eligible and living together), each (b) .....	48-25	50-85
Wife (if not a pensioner) .....	48-25	50-85
Widows' pensions—		
Class A (widows with dependent child or children) (a) .....	61-90	65-05
Class B .....	57-90	61-05
Class C .....	57-90	61-05
Supporting parent's benefit (a) .....	61-90	65-05
Unemployment, sickness and special benefits—		
Single person (under 18 years) .....	36-00	36-00
Single person (18 years and over)—		
Sickness beneficiaries .....	57-90	61-05
Others with no dependants .....	51-45	51-45
Others with at least one dependant .....	57-90	61-05
Married person .....	96-50	101-70
Additional pension or benefit for each child (c) .....	7-50	7-50
Supplementary assistance/allowance (d) .....	5-00	5-00
Family allowances (monthly rates)—		
One child .....	15-20	15-20
Two children .....	36-90	36-90
Three children .....	62-90	62-90
Four children .....	88-90	88-90
For each subsequent child .....	30-35	30-35
Handicapped child's allowance (monthly rates) .....	65-00	65-00
Double orphan's pension (monthly rates) .....	47-70	47-70
Funeral Benefit (single lump sum payment) (e) .....	40-00	40-00

(a) Includes mother's/guardian's allowance of \$4-00 a week. This allowance is payable at the rate of \$6-00 a week where the pensioner or beneficiary has a child under 6 years or an invalid child in his or her care.

(b) Where pensioner couples are living apart because of illness or infirmity, they each may be paid at the single rate.

(c) Paid to a pensioner or beneficiary in respect of each child under 16 years and each full time student aged 16 to 24 years who is wholly or substantially dependent on that person.

(d) Paid to pensioners, supporting parent beneficiaries and to sickness beneficiaries (who have been receiving the benefit for a continuous period of six weeks) who pay for lodgings or rent and who have little or no income apart from their pension or benefit.

(e) If the person liable for the funeral costs is not a pensioner, the funeral benefit will be \$20.

In the previous table a description was given of the various Social Security pensions, benefits, etc. The rates and conditions are varied from time to time by amending legislation.

The Federal Treasurer outlines social security proposals in his budget and these are implemented in later Acts. In the 1979-80 Budget the Government announced its decision to restore twice yearly automatic indexation to indexed pensions and benefits from November 1979.

### *Income Test*

The same income test applies with respect to all pensions and supporting parent's benefit. Blind persons, however, may receive the maximum rate of pension free of the income test. Unemployment and sickness benefits and eligibility for fringe benefits and supplementary assistance are subject to different income tests.

### *Age and Invalid Pensions*

Generally pensions are payable to persons who have been resident in Australia, New Zealand or the United Kingdom for 10 years in the case of age pensioners and five years in the case of invalid pensioners. (Reciprocal agreements exist with New Zealand and the United Kingdom.)

The qualifying ages for aged pensions are 65 years for men and 60 years for women; invalid pensions are payable to persons over 16 years of age who are permanently incapacitated for work (to the extent of at least 85 per cent) or are permanently blind. Sheltered employment allowance is paid as an alternative to the invalid pension to invalids who take work in approved sheltered employment. Additional allowances are payable for dependants under certain conditions.

Under the income test, the maximum rate of pension is reduced by \$1 for every \$2 by which income as assessed exceeds the 'free' areas of \$20 per week for a single person and \$34.50 for a married couple.

The 1973 Budget abolished the means test for all people aged 75 years or more and an amending Act passed in April 1975 abolished the means test for all persons aged 70 years or more. From August 1978, the income test has been re-introduced for all pensions except in cases of persons who are permanently blind. However, the income test was not to apply to persons aged over 70 in respect of the level of pension received in August 1978 but pension increases for such persons are subject to the income test.

On the death of one of a married pensioner couple, the survivor receives six fortnightly instalments at the married couple rate before reduction to the single rate.

### *Wives' Pensions*

Where the wife of an age or invalid pensioner is not qualified for an age or invalid pension in her own right, and she is not a service pensioner, she may receive a wife's pension.

### *Widows' Pensions*

These were first introduced in 1942. If the claimant and her husband were not residing permanently in Australia when she became a widow, the claimant must have resided in Australia for five years immediately prior to the claim, or must have resided in Australia for a continuous period of 10 years at any time. (Reciprocal agreements exist with New Zealand and the United Kingdom).

The following table shows, for Tasmania, the number of persons receiving age, invalid and widows' pensions, and supporting parents' benefits; and the amounts paid out in pensions and allowances:

**Age, Invalid and Widow Pensioners and Supporting Parents' Benefits, Tasmania**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Age and invalid pensions—						
Number of age pensioners (a)—						
Males .....	11 225	11 700	12 114	(b) 12 792	13 122	13 363
Females .....	23 044	23 894	24 840	(b) 25 412	25 763	26 203
Persons .....	34 269	35 594	36 954	(b) 38 204	38 885	39 566
Number of invalid pensioners (a)—						
Males .....	3 341	3 918	4 401	(b) 4 162	4 365	4 397
Females .....	2 119	2 173	2 211	(b) 2 043	2 052	1 979
Persons .....	5 460	6 091	6 612	(b) 6 205	6 417	6 376



## Age, Invalid and Widow Pensioners and Supporting Parents' Benefits, Tasmania—continued

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Number of wife pensioners (a)—	1 806	2 054	2 360	2 547	2 641	2 689
Amount of pensions paid ..... \$'000	60 118	77 976	91 788	107 203	117 678	127 382
Widows' pensions—						
Number (a) .....	4 103	4 209	4 572	5 001	5 229	5 358
Amount paid ..... \$'000	8 521	11 221	12 455	14 660	16 621	18 844
Supporting parent's benefit—						
Number (a) .....	1 289	1 699	1 778	1 984	2 057	2 260
Amount paid ..... \$'000	2 819	4 742	5 578	6 404	7 494	8 300

(a) At 30 June.

(b) Figures affected by transfer to age pensions of residentially qualified invalid pensioners who had reached age pension age but who were not transferred in previous years.

The classes of widows are as follows: (i) a class A widow has one or more dependent or student children in her care; (ii) a class B widow is at least 50 years of age, or 45 years when her class A pension ceases (because she no longer has a child in her care); and (iii) a class C widow is under 50, without children, and in necessitous circumstances in the 26 weeks following her husband's death. The term 'widow' includes a deserted wife, a divorcee and a woman whose husband has been imprisoned for at least six months or is a patient in a mental hospital. Certain 'dependent females' may also qualify for pension.

*Supporting Parents' Benefit*

Supporting mother's benefit was introduced in 1973 and was extended in 1977 to include males and renamed supporting parent's benefit. The benefit may be payable to a person who has the custody, care and control of a child and who is a male divorcee, a widower, a separated husband or wife or a separated defacto husband or wife. The benefit may also be payable to a person whose partner is in a mental hospital, an unmarried parent or a sole parent who supports a child for any other reason and who does not qualify for a widow's pension.

*Unemployment, Sickness and Special Benefits*

To receive unemployment benefits, a person must be out of work (but not through being a direct participant in a strike or due to industrial action by other members of a trade union of which the person is a member), must be capable of undertaking and willing to undertake suitable work and have taken reasonable steps to obtain employment. Registration with the Commonwealth Employment Service is necessary; payment is at the discretion of the Department of Social Security.

Sickness benefits may be paid to a person temporarily unable to work because of sickness or injury and who has suffered a loss of income because of this. A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where the husband is able to maintain her partially, a benefit may be paid at a rate considered reasonable in the circumstances.

Benefits are not payable to people qualified to receive invalid, age, widows' or service pensions, supporting parents' benefits, or tuberculosis allowances. The minimum age is 16 years, the maximum 65 (male) and 60 (female). There are no nationality restrictions, but if a claimant has not been resident in Australia for one year before making the claim, the Department must be satisfied that he intends to live here permanently.

The next table gives Tasmanian details for unemployment, sickness and special benefits:

Unemployment, Sickness and Special Benefits, Tasmania  
Beneficiaries and Payments

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Unemployment benefits—						
Claims granted .....	no. 22 088	30 930	23 860	27 337	26 294	26 316
Persons on benefit—						
At 30 June .....	no. 4 439	7 228	7 078	9 757	10 420	11 121
Weekly average .....	no. 3 555	6 302	7 161	8 538	10 295	10 579
Benefits paid .....	\$'000 7 746	15 256	17 963	23 398	28 609	29 665

**Unemployment, Sickness and Special Benefits, Tasmania**  
**Beneficiaries and Payments—continued**

Particulars		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Sickness benefits—							
Claims granted	no.	4 144	5 018	4 635	4 284	3 881	3 559
Persons on benefit—							
At 30 June	no.	682	1 064	959	816	731	895
Weekly average	no.	632	772	933	887	709	746
Benefits paid	\$'000	1 692	2 409	2 380	2 385	2 024	2 299
Special benefits—							
Claims granted	no.	800	1 760	1 822	1 792	2 071	2 051
Persons on benefit—							
At 30 June	no.	297	471	469	516	556	616
Weekly average	no.	215	359	461	476	525	571
Benefits paid	\$'000	421	811	979	804	1 299	1 487
Total benefits—							
Claims granted	no.	27 032	37 708	30 317	33 413	32 246	31 926
Persons on benefit—							
At 30 June	no.	4 534	8 763	8 506	11 089	11 707	12 632
Weekly average	no.	5 286	7 433	8 555	9 901	11 529	11 850
Benefits paid	\$'000	9 859	18 476	21 322	26 587	31 933	33 451

A special benefit may be granted to a person not qualified for a pension or an unemployment or sickness benefit if, because of age, physical or mental disability, domestic circumstances, or for other valid reasons, he is unable to earn a sufficient livelihood for himself and his dependants. Recipients of special benefits include, among others, persons caring for invalid parents and persons ineligible for age, invalid or widows' pensions because of lack of residence qualifications.

#### *Fringe Benefits*

Pensioners and supporting parents beneficiaries, subject to an income test, can obtain a range of free pharmaceuticals; free optometrical consultations from participating optometrists; free medical treatment if the treating doctor bulk bills or 85 per cent of schedule fee subject to a maximum payment of \$5; a telephone rental concession; a mail redirection concession; hearing aid services; and fare reductions on Commonwealth Government rail and shipping services.

#### *Income Taxation Applicable to Pensions and Benefits*

Income from age, wives' or widows' pensions and supporting parents', unemployment, sickness or special benefits is classified as taxable income but the amount received in a full year is usually less than the level at which income tax becomes payable. Supplementary assistance, guardians' or mothers' allowances and additional benefits for children are not taxable. If other income is earned and this raises total income above the minimum level, normal income tax provisions apply. Invalid pensions are exempt from taxation unless the invalid is of age pension age.

#### *Double Orphan's Pension*

The 1973 Budget introduced the double orphan's pension, which is payable to institutions or persons caring for a child whose parents are both dead or one parent is dead and the other parent cannot be located. At 30 June 1980 there were 96 orphans for whom pensions were being paid. Total payments in 1979-80 were \$57 000.

#### *Handicapped Child's Allowance*

The handicapped child's allowance is payable to the parent or guardian of a physically or mentally handicapped child who is living in the family home and needs constant, or almost constant, care and attention. At 30 June 1980, allowances were being paid with respect to 629 severely handicapped and 32 substantially handicapped children (155 new allowances were granted during 1979-80) and payments during 1979-80 totalled \$481 000.

### Family Allowances

Legislation in June 1976 abolished tax rebates in respect of dependent children but this was offset by significant increases in family allowance (previously called 'child endowment') payments payable to persons (usually the mother) with dependent children. Family allowances are not subject to automatic annual indexation and have remained unchanged since 1 July 1976. One year's residence in Australia is required if the mother and child were not born here, but this requirement is waived if the Department is satisfied they intend to remain here permanently. Students aged 16 to 24 receiving payments under the Tertiary Education Assistance Scheme and certain other Commonwealth education schemes are excluded from eligibility. During 1978-79 the payment cycle was changed from four-weekly to monthly.

The following table shows family allowance statistics for Tasmania for recent years:

**Family Allowances, Tasmania**  
**Child and Student Dependents and Payments**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Dependent children and students (a)—						
Children in endowed families (b)..... no.	126 461	125 391	(c) 129 054	(c) 127 806	(c) 125 359	(c) 124 203
Children in approved institutions (b)..... no.	399	309	(c) 340	(c) r 292	(c) 244	(c) 209
Students (d)..... no.	5 894	5 911	—	—	—	—
Total ..... no.	132 754	131 611	129 394	128 098	125 603	124 412
Amount paid during year.. \$'000	7 099	(e) 7 766	31 197	30 968	(f) 28 924	30 549

(a) Number at 30 June.

(b) Children under 16 years.

(c) Includes dependent students under 25 years.

(d) Students 16 but under 21 years; includes students in approved institutions to 1975-76.

(e) Includes some payments of the increased family allowances.

(f) Payments affected by rescheduling of payments dates resulting from change from four-weekly to monthly payments.

### Commonwealth Rehabilitation Service

This service aims to fit handicapped people for employment by supplying medical and hospital treatment, surgical aids and appliances and, where necessary, arranging special education and training courses in industry, trade, commerce, public service, etc. Although employment is specifically the responsibility of the Federal Department of Employment and Youth Affairs, vocational counsellors arrange employment with suitable employers and follow up progress.

Rehabilitation training is given if the disability is a substantial handicap to engaging in full employment. Disabled people who do not qualify for free service may pay for rehabilitation themselves or may be sponsored by private or government organisations. In Tasmania, the Department's rehabilitation centre is located in Hobart.

Amendments made to the *Social Services Act* in November 1977 enable assistance to be offered to all handicapped people, within the broad working age group, who would derive substantial benefit from the types of programs the Service offers.

The following table shows the numbers accepted for rehabilitation and placed in employment in Tasmania:

## Operation of the Rehabilitation Service, Tasmania

Particulars		1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Persons—							
Accepted for rehabilitation .....	no.	131	134	159	169	310	492
Placed in employment .....	no.	82	74	101	79	70	116
Expenditure (a) .....	\$'000	321	440	525	461	519	805

(a) Excludes capital expenditure on sites and buildings and administrative costs of the Rehabilitation Service.

*Douglas Parker Rehabilitation Centre*

The Douglas Parker Rehabilitation Centre in Hobart is a joint Commonwealth-State project designed to provide a modern rehabilitation facility for Tasmania.

Construction of Stage 2 of the centre which provides treatment and training facilities was completed in May 1980. In all, there will be places for 120 adults and 80 children at the Centre. The Third Stage has begun and will provide food service facilities, amenities, some offices and residential accommodation for 50 rehabilitees.

*Homes for the Aged or Disabled*

The *Aged or Disabled Persons Homes Act 1974* provides for building subsidies and separate land subsidies on a \$2 for \$1 basis (up to a maximum amount, which is determined from time to time). The current maximum subsidies are for a single unit, \$12 100; double unit, \$14 035; and for land for a unit, \$1 920. These subsidies are payable to approved organisations intending to build or acquire homes for aged or disabled persons. The aim is to provide homes in which the conditions approach normal domestic life. ('Homes' in this context do not refer to houses built under Federal-State Housing Agreements.)

During 1979-80, eight grants were approved under the *Aged or Disabled Persons Homes Act 1974*; the amount granted was \$517 750.

*Personal Care Subsidy:* A subsidy of \$15 per week is payable to eligible organisations in respect of all persons who receive approved personal care in hostel-type accommodation in an aged persons' home eligible under the *Aged or Disabled Persons Homes Act 1974*, and for whom National Health Benefit is not received. During 1979-80, 21 organisations cared for 546 qualified residents and received subsidies totalling \$431 440.

*Delivered Meals Subsidy:* A subsidy at the rate of 25 cents (plus five cents if vitamin C supplement provided) for each delivered meal is payable to approved organisations providing a 'meals-on-wheels' service. In 1979-80, 30 organisations in Tasmania provided approved meal services, and subsidy payments totalled \$93 908.

*Handicapped Persons Welfare*

The *Handicapped Persons Assistance Act 1974* provides assistance for the following prescribed services relating to handicapped or disabled persons: (i) training; (ii) activity therapy; (iii) sheltered employment; (iv) residential accommodation; (v) holiday accommodation; (vi) recreational facilities; and (vii) rehabilitation facilities.

Assistance toward approved expenditure is given to organisations under the Act by a \$4 for \$1 subsidy towards: (i) the capital cost of projects; (ii) the cost of building maintenance; (iii) the rental of premises; and (iv) the cost of equipment. In addition salary subsidies of up to 100 per cent are payable for the first two years after an organisation has commenced to provide a prescribed service and a 50 per cent subsidy is payable in all other cases. A training fee of \$500 is payable to a sheltered workshop for each disabled person placed in open employment for a period of not less than 12 months. Federal Government expenditure in Tasmania on assistance to handicapped persons under the *Handicapped Persons Assistance Act* in 1978-79 was \$1 512 435.

*Child Care*

Organisations may receive financial assistance for a range of child care projects including full day care, occasional and emergency care. Both capital and recurrent grants are available.

*Migrant Welfare*

Social workers are available to assist people with personal problems. There are also migrant welfare officers and a community interpreter service available to assist migrants.

# State Department of Social Welfare

## Expenditure

Activities of this State Government Department are grouped under Child Welfare and Relief Divisions. The following table shows expenditure over a five-year period:

Department of Social Welfare, Tasmania: Expenditure  
(\$'000)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Administration and general .....	941	1 525	1 770	2 192	2 540	2 943
Relief Division .....	826	1 008	1 304	1 734	2 187	2 616
Child Welfare Division .....	477	632	774	830	945	1 053
Grants to organisations .....	157	174	160	361	496	630
Total .....	2 401	3 339	4 008	5 117	6 168	7 242

In 1978-79 the major expenses were: under Relief Division, fuel allowances for eligible pensioners, \$328 000 and relief and maintenance, \$2 094 000; under Child Welfare Division, maintenance of boarded-out children, \$449 000 and contributions towards maintenance of children in approved institutions, \$369 000; under grants to organisations, Tasmanian Institute for Blind and Deaf, \$175 000 and cost of operation of women's shelter \$267 000.

## Relief Division

The functions of this Division are to investigate applications for assistance from needy mothers with dependent children and to give cash relief where necessary; to issue heating allowances (subject to an income test) to age, invalid and widow pensioners; and to help pay for funerals, transport, furniture removals, artificial limbs, spectacles, etc., for persons in needy circumstances. Special grants are made to deserted wives (and sometimes deserted husbands) left with children, wives with husbands in gaol, to certain persons awaiting receipt of federal benefits or pensions, and to relatives supporting deserted children.

## Child Welfare Division

The work of this Division includes the investigation of complaints that children are neglected or inadequately controlled; the supervision of neglected children in their own homes to avert the need for more drastic action; the investigation of cases to appear in Children's Courts; the supervision of children under court order; the placement and supervision of children made wards of the State; the control of the Department's receiving and other homes; the recovering of maintenance costs, where possible, from parents of children who are a charge on the Department; the licensing and supervision of children's boarding homes and day nurseries; the supervision of child migrants; and welfare of children referred by courts in divorce actions. (Statistics relating to children appearing before Children's Courts are included in Chapter 16.)

Where, because of illness, a mother is unable to undertake her normal duties, accommodation may be provided for her children at one of the family group homes run by the Department.

**Adoption of Children:** Child welfare officers investigate applications by prospective adoptive parents and interview mothers wishing to place their children for adoption. Applications for adoption of children are heard by a magistrate.

The Department of Social Welfare compiled, with the assistance of the Australian Bureau of Statistics, statistics on persons under guardianship at 30 June 1980 and persons adopted during the 12 months ended 30 June 1980. These statistics were collected as part of the Standardisation of Social Welfare Statistics Project ('Welstat') and are shown below:

## Social Welfare and Health Services

**Persons under Guardianship of State Welfare Department  
(Excluding Adoption and Immigration Cases (a),  
at 30 June 1980, Tasmania)**

Type of placement	Children—Age (years) at 30 June 1980						Adults (18 years and over)	Total
	0-3	4-7	8-11	12-14	15-17	Total child- ren		
RESIDENTIAL CHILD CARE ESTABLISHMENTS (b)								
Handicapped children .....	1	4	6	9	3	23	..	23
Other children—								
Family group homes								
(scattered) (c) .....	3	12	9	27	28	79	..	79
Campus homes .....	—	—	10	24	11	45	..	45
Juvenile corrective institutions .....	—	—	—	5	17	22	..	22
Other homes for children .....	—	4	7	5	1	17	..	17
Total .....	4	20	32	70	60	186	..	186
Foster care (d) .....	24	52	72	60	43	251	..	251
RESIDENTIAL HEALTH, EDUCATION, ADULT PENAL OR ADULT CARE ESTABLISHMENTS								
Hospitals and nursing homes .....	—	1	2	1	1	5	—	5
Prisons .....	..	..	..	..	2	2	—	2
OTHER TYPES OF PLACEMENT								
Living with parent or other relative .....	7	15	16	30	70	138	6	144
Other adult care .....	3	2	2	2	25	34	1	35
Living independently .....	—	—	—	—	15	15	—	15
Unauthorised absences .....	—	—	—	1	1	2	—	2
Other .....	—	3	—	—	—	3	—	3
TOTAL								
Total .....	38	93	124	164	217	636	7	643

- (a) Adoption and immigration cases refer to persons under the guardianship of the Department of Social Welfare under legislation controlling the adoption of children under the *Immigration (Guardianship of Children) Act* 1946.
- (b) A 'residential child care establishment' provides accommodation and meals with at least some personal care, protection, control, corrective treatment or detention to children who, temporarily or permanently, are unable, not permitted or unwilling to live with their natural or adoptive parents. The establishment must be provided by a government authority, or non-government organisations for the purpose of providing substitute care to children. It excludes residential establishments mainly engaged in providing education or health services to children.
- (c) A 'family group home' is a residential child care establishment consisting of a single dwelling in which usually not more than 10 children are cared for 'round the clock' by the same adult(s) (often a married couple) who live in the home and act as substitute parent(s) to the children. 'Scattered' means that the grounds of the home do not adjoin those of another family group home, or other residential child care establishment, operated by the same enterprise.
- (d) 'Foster care' is when a child is living apart from his natural or adoptive parents in a private household and is being cared for by one or more adults who act as substitute parents to the child and are paid a regular allowance for the child's support by a government authority or a non-government organisation.

**Persons Adopted, 1979-80, Tasmania**

Type of adoption organisation	Persons adopted by				
	Relatives			Non- relatives	Total
	Parents	Other relatives	Total		
No adoption organisation .....	10	—	10	—	10
Adoption organisation—					
State Welfare Department .....	44	4	48	69	117
Non-government .....	—	—	—	21	21
Total .....	54	4	58	90	148

### Wards of the State and Supervised Children

Children are made wards of the State either on application of a parent or relative (e.g. in the case of both parents' death or desertion) or by a court order. Children may remain wards until they reach the age of 18. Wards, while under the supervision of a welfare officer, are often returned to their home and in such cases wardship is frequently terminated, as it is with those who successfully take up employment.

At 30 June 1979, there were 922 children under State control or supervision. Of these children 246 were under legal supervision of child welfare officers as a result of court-imposed supervision orders and 674 were wards of the State.

Wards are placed in: (i) foster homes (mostly ordinary family homes); and (ii) children's homes (private and departmental). The Department makes payments, based on the child's age, for wards in foster homes and contributes to non-departmental institutions for the maintenance of State wards. From 1 October 1979 these payments were set at from \$20.00 to \$22.50 per week.

Approved children's homes and foster homes are assisted with major items of clothing. The Department accepts responsibility for hospital expenses and cost of dentistry for wards of the State where this treatment is not available from school dental or hospital services. Optical expenses are also met where necessary. Pocket money, varying from 60 cents to \$2.50 per week is provided for children in foster homes. Assistance, at the rate of \$24.25 per week from 1 October 1977, is also available in respect of certain non-wards, who are orphans or abandoned, in the care of the managers of approved children's homes.

The following table gives details relating to the location of wards of the State and the numbers of children made wards and ceasing to be wards, for the last six years:

**Wards of the State, Tasmania: Location, Admissions and Discharges**  
(Number)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Location at 30 June—						
In homes—						
Departmental .....	105	94	78	77	58	54
Other children's homes .....	163	179	159	147	138	134
Foster .....	390	390	329	300	284	261
With parents or relatives .....	201	201	232	207	193	171
In private lodgings .....	39	35	27	30	31	16
Other (a) .....	41	37	41	32	17	38
Total .....	939	936	866	793	721	674
Children made wards during the year—						
By courts—Delinquent .....	42	50	40	36	24	41
Neglected .....	76	90	33	24	36	29
On parents' or guardians' request—						
Neglected (uncontrolled) (b) .....	7	1	—	—	—	—
Deserted, or parents unable to provide (c) .....	59	40	31	40	16	12
Total .....	184	181	104	100	76	82
Children ceasing to be wards during the year—						
Adopted .....	28	27	37	25	131	120
Supervision not needed, age, etc. ....	144	157	137	148	15	9
Total .....	172	184	174	173	146	129

(a) Children in hospitals, other government institutions, missing, etc.

(b) Neglected—unfit for guardianship.

(c) Destitute and/or homeless.

The next table shows Government expenditure on wards of the State:

**Wards of the State, Tasmania: Government Expenditure  
(\$'000)**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Expenditure on departmental homes .....	412	703	760	843	901	982
Maintenance of children—						
In foster homes .....	244	325	387	395	418	449
In non-departmental homes .....	113	162	213	239	302	369
Total expenditure .....	769	1 190	1 360	1 477	1 621	1 800

*Departmental Homes:* The State's 18 receiving homes, which provide temporary accommodation for children, are maintained at Hobart, Launceston, Wynyard, Devonport and Burnie.

Ashley Home for Boys, Deloraine, provides care and training for older wards who, because of maladjustment or delinquency, require institutional control.

Wybra Hall, Mangalore, provides care and training for younger wards and boys on remand. Ages range from eight to 15 years and those admitted have problems of maladjustment or delinquency.

Westwinds, Woodbridge, is a home for intellectually and educationally retarded boys who range in age between five and 15. Boys of school age attend various schools in the area where there are special facilities recommended by the Educational Guidance Authorities as suitable for meeting their individual needs.

*Non-departmental Homes:* Other children's homes in which wards are placed are: Kennerley Children's Homes at Claremont and Chigwell; Salvation Army Boys' Home, Salvation Army Girls' Home, St Joseph's Child Centre, Bethany Boys' Hostel, and Hillcrest, all in Hobart; Yalambee Hostel, Glenorchy; Clarendon Home, Kingston; Girls' Home and Glenara Home for Boys, Launceston; Glendel in Deloraine; Glenhaven in Devonport and Ulverstone; and Roland Boys' Home, Sheffield.

## REPATRIATION SERVICES AND PENSIONS

### General

The Department of Veterans' Affairs was originally established as the Repatriation Commission under federal legislation in 1920. The Department is responsible for: (i) the payment of disability and service pensions to eligible veterans and their dependants; (ii) the provision of medical treatment to veterans for injuries and illnesses caused or aggravated by their war service; (iii) the provision of medical treatment to widows and dependants of deceased veterans whose deaths were due to war service; (iv) the provision of medical treatment in certain circumstances to veterans who are suffering from injuries and illnesses not caused or aggravated by war service; and (v) medical treatment for veterans of the 1914-18 War and the Boer War and for all ex-prisoners of war. The Department is also responsible for functions administered by the Defence Service Homes Corporation and the Office of Australian War Graves.

Benefits are provided in respect of service in the 1914-18 and 1939-45 Wars, in the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve and the Special Overseas Forces including veterans from the Vietnam operations. Certain members of the defence forces serving on or after 7 December 1972 are also eligible for benefits. Benefits may be provided for seamen in respect of maritime service during the 1939-45 War under the *Seamen's War Pensions and Allowances Act 1977*.

### Repatriation Pensions

Disability pensions are payable, without general application of an income test, for war-caused or war-aggravated disabilities. Service pensions are payable in the main, to male



veterans 60 years and over (and female veterans 55 years and over) subject to an income test; no disability need be claimed.

Disability and dependants' pensions may be granted to persons, or to dependants of persons, who come within the following categories and who suffered death or disability: (i) arising from any occurrence before discharge, or on overseas war service or on service in Australia within certain areas; (ii) attributable directly to service where the member served only in Australia; (iii) from aggravation of a condition existing at enlistment where camp service exceeded six months.

Those who receive disability pensions are also eligible for free medical and hospital treatment for their pensionable disabilities. With certain categories of pensioners, the eligibility for free treatment is widened to cover all disabilities. It is also possible for a veteran to qualify for free treatment for a disability without necessarily being granted a pension.

Service and dependants' pensions may be granted to persons (or to dependants of persons) who come within the following categories and satisfy an income test: (i) men aged 60 or over who served in a theatre of war or women 55 years and over who served abroad; (ii) men and women with similar service particulars who are permanently unemployable. The conditions governing the income test are the same as for old age pensions described earlier in this chapter.

Details of selected repatriation benefit rates are shown in the following table:

**Repatriation Benefits, Tasmania (a)**  
(\$ Per Week)

Benefit	Rate			
	At 4 May 1978	At 2 Nov. 1978	At 1 Nov. 1979	At 1 May 1980
<b>PAYABLE WITHOUT INCOME TEST</b>				
Disability pensions—				
Special rate (T.P.I.) pensions—				
Veteran .....	98.55	101.90	110.90	116.90
Wife .....	4.05	4.05	4.05	4.05
Each child .....	1.38	1.38	1.38	1.38
Intermediate rate pensions—				
Veteran .....	67.85	70.15	76.35	80.45
Wife .....	4.05	4.05	4.05	4.05
Each child .....	1.38	1.38	1.38	1.38
General rate pensions (maximum rates)—				
Veteran .....	37.20	38.45	41.85	44.10
Wife .....	4.05	4.05	4.05	4.05
Each child .....	1.38	1.38	1.38	1.38
War widows—				
Pension .....	51.45	53.20	57.90	61.05
Domestic allowance .....	12.00	12.00	12.00	12.00
Orphans' pensions—				
One parent dead—				
Each child .....	10.45	10.45	12.50	12.50
Both parents dead—				
Each child .....	20.90	20.90	25.00	25.00
<b>PAYABLE SUBJECT TO INCOME TEST (MAXIMUM RATES)</b>				
Service pensions—				
Veteran—Standard (single person) .....	51.45	53.20	57.90	61.05
Married .....	42.90	44.35	48.25	50.85
Addition for each child .....	7.50	7.50	7.50	7.50
Wife's pension (if she is not a pensioner) .....	42.90	44.35	48.25	50.85
Guardians' allowances—				
Where there is a child under six years or an invalid child requiring full-time care .....	6.00	6.00	6.00	6.00
Other cases .....	4.00	4.00	4.00	4.00

(a) Details relating to conditions of eligibility for the various pensions are available from the Department of Veterans Affairs.

*Disability Pension Payments*

The following table shows, for Tasmania, the number of pensions in respect of veterans and their dependants, together with expenditure on disability pensions:

**Disability Pensions, Tasmania: Pensioners and Payments**

Year	Number of pensions current at 30 June				Expenditure during year (a)  (\$'000)
	Incapacitated veterans	Dependants of—		Total	
		Incapacitated veterans	Deceased veterans (b)		
1974-75 .....	8 219	11 231	2 015	(c) 21 474	13 697
1975-76 .....	8 120	10 670	1 978	(c) 20 778	14 827
1976-77 .....	7 950	10 182	1 916	(c) 20 062	16 637
1977-78 .....	7 734	9 169	1 941	18 844	18 676
1978-79 .....	7 521	8 678	1 928	18 127	18 696
1979-80 .....	7 349	8 400	1 753	17 502	19 389

(a) Includes widows' allowances.

(b) Includes war widows' pensions.

(c) Includes miscellaneous pensions not specified under the 'veteran' details, e.g. seamen's war pensions and allowances.

At 30 June 1980 the proportions of veterans in Tasmania receiving disability pensions were: in respect of service in the 1914-18 War, 3.9 per cent; the 1939-45 War, 88.9 per cent; the Korea and Malaya operations, 1.8 per cent, and other operations 5.4 per cent.

*Service Pension Payments*

The following table shows, for Tasmania, the number of service pensions in respect of veterans and their dependants, and expenditure on pension payments:

**Service Pensions Tasmania: Pensioners and Payments**

Year	Number of pensions current at 30 June				Expenditure during year (\$'000)
	Veterans	Dependants of—		Total	
		Living pensioners	Deceased pensioners		
1974-75 .....	3 433	1 822	120	5 375	6 668
1975-76 .....	3 843	2 150	112	(a) 6 163	(a) 9 313
1976-77 .....	4 386	2 564	119	(a) 7 162	(a) 12 327
1977-78 .....	4 945	3 094	62	(a) 8 101	(a) 15 722
1978-79 .....	5 428	3 466	53	(a) 8 947	(a) 18 486
1979-80 .....	5 962	3 867	51	9 880	21 831

(a) Includes British Commonwealth pensions.

**Medical Services**

To discharge these functions in Tasmania, the Department of Veterans' Affairs maintains a branch office, a general hospital and an artificial limb and appliance centre in Hobart. Facilities exist at the Repatriation General Hospital for medical treatment of hospitalised patients and specialist services for out-patients. Generally treatment for out-patients throughout the State is provided by doctors appointed by the Department as Local Medical Officers. People entitled to treatment can select a doctor from the panel of L.M.O.s and receive treatment at departmental expense. Payment for treatment in hospitals other than the Repatriation General Hospital is met by the Department only in certain circumstances.

Benefits include: (i) free treatment for all veterans of the Boer War and the 1914-18 War and for all ex-prisoners of war (this includes medical, hospital, dental, ophthalmological and para-medical treatment and, subject to a contribution of \$57.75 per week, treatment in nursing homes); (ii) veterans, who are suffering from malignant cancer, are for that condition eligible for free medical and hospital treatment and, subject to a contribution of \$57.75 per week, to nursing home treatment; and (iii) allowing the facilities of the Repatriation Artificial Limb and Appliances Centres to be used to provide free artificial limbs to the general public.

### **Soldiers' Children Education Scheme**

#### *Eligible Children*

Educational assistance is granted to veterans' children in particular circumstances: (i) if the parent has died from causes attributed to war service or was receiving disability pension for specific serious disabilities at the time of death; (ii) if the parent, as a result of war service, is blinded or totally and permanently incapacitated.

#### *Benefits*

For children under 12 years, the scheme pays the cost of school requisites and fares. At secondary level, fortnightly maximum payments are: under 14 years, \$7.40; 14 and under 16, \$11.10; 16 years and over, \$24.30 if both parents are living and \$36.10 if only one parent is living. At tertiary level, those living at home may receive \$48.00 per fortnight and those living away from home, \$79.80.

## **HEALTH SERVICES**

### **Department of Health Services**

#### *Headquarters*

Responsibilities of the headquarters of the Department of Health Services include:

- (i) public hospital management advisory services and the licensing of private hospitals and other medical establishments under the *Hospitals Act 1918*;
- (ii) District Medical Service;
- (iii) School Dental Service;
- (iv) Nurses' Registration Board and Dental Mechanics' Registration Board;
- (v) Tourist Nursing Service;
- (vi) legislation concerned with health and allied matters;
- (vii) certain specialist medical services;
- (viii) State Drug Advisory Committee;
- (ix) liaison with the health departments of other states and the Federal Government (the Director-General of the State Department is a member of the National Health and Medical Research Council and the (National) Hospital and Allied Services Advisory Council); and
- (x) liaison with professional, medical, dental and nursing associations.

The Director-General is the controlling authority under the Hospital Employees' Award, the Medical Officers' Award and the Nurses' (Public Hospitals) Award. Headquarters also controls and maintains Crown property occupied by the various sections of the Department and deals with the appointment and salaries of staff who are not officers of the Public Service.

#### *General*

The State Department of Health Services is responsible for the maintenance of the health of the community, the prevention of disease and the provision of government hospital and medical services. The Department is under the jurisdiction of the Minister for Health, with the Director-General of Health Services as its permanent head. The Government Analyst's Laboratory is under the control of the Government Analyst and Chemist.

**Department of Health Services, Tasmania: Expenditure from Consolidated Revenue  
(\$'000)**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Administration, head office .....	665	705	943	1 009	854
Hospital and medical services—					
Administration .....	518	520	676	636	578
Grants to hospitals .....	33 030	40 057	53 630	61 877	66 416
Medical services, country districts .....	342	416	471	441	510
Dental Health Service .....	1 164	1 421	2 348	2 627	2 798
Nurses' Registration Board .....	12	8	19	22	55
Interim Ambulance Authority .....	594	713	1 136	1 152	1 774
Government Analyst and Chemist .....	265	287	308	347	382
St John's Park Hospital .....	3 920	4 696	5 506	6 262	6 722
Public Health—					
Administration and inspectors .....	475	586	635	677	684
School Medical Service .....	365	422	405	506	570
Child Health Service .....	424	505	566	667	642
Community Health Services .....	62	543	1 104	1 724	1 950
Tuberculosis .....	517	558	567	118	90
Miscellaneous grants and expenses .....	1 239	1 142	1 260	2 003	2 520
<b>Total .....</b>	<b>43 591</b>	<b>52 579</b>	<b>69 574</b>	<b>80 068</b>	<b>86 545</b>

### *School Dental Health Service*

This service, available free to children up to school leaving age, aims to examine and treat every child annually. At the end of June 1980, 44 static clinics were established at urban centres throughout the State, while 41 mobile units provided services in most country districts. An orthodontic service is based in Hobart and there are permanent clinics in Launceston and Devonport. Due to staff shortages, only the Hobart clinic is occupied.

*Dental Therapy:* Tasmania became the first Australian State to develop a School of Dental Therapy. Seventeen first-year and 14 second-year students, including several students trained on behalf of the Federal Government (these are employed in the Australian Capital Territory after graduation) underwent training in 1979. Eleven classes have graduated since January 1968 (after two-year courses) and the graduates have been appointed to clinics throughout the State. The school is located in Hobart and has a residential hostel attached providing accommodation for 30 students.

### *Fluoridation*

In 1953 Beaconsfield became the first local government authority to add fluoride to its water supply and Launceston followed in 1961. In 1964 Hobart became the first Australian capital city to add fluoride to its water supply.

A Royal Commission inquired into fluoridation of water supplies in 1968. It reported favourably and recommended its extension throughout the State. The State Government passed the *Fluoridation Act 1968*, setting up a Fluoridation Committee with power to recommend to the Minister for Health the fluoridation of any public water supply and to oversee fluoridation operations. It is required to report annually to the Minister who must lay the report before Parliament.

By June 1979, fluoridation had been extended to include: the whole of the greater Hobart area served by the Derwent and Southern Regional Water Supply Schemes, extending as far afield as Sorell, Campania, Kempton, New Norfolk and Snug; the City of Launceston and surrounding areas supplied by the West Tamar and North Esk Regional Water Supplies; and numerous towns supplied by individual schemes including Burnie, Devonport, Smithton, Waratah, Queenstown, Deloraine, Scottsdale, St Helens, Campbell Town, Oatlands, Strathgordon, Huonville, Ranelagh, Cygnet, Geeveston, Dover, Tullah, Zeehan, Savage River and Bridport.

### *District Medical Service*

In 1937 the Government undertook to help the more remote municipalities obtain medical services. Up until June 1975, participating municipalities levied a rate under the *Local Government Act* 1962, as amended, and met between one-half and one-third of the cost of the scheme. From July 1975, the Federal Government has contributed 50 per cent of the operating costs of the scheme by means of a Health Program Grant under the *Health Insurance Act*, the remaining 50 per cent being financed from State funds. Participating municipalities currently contribute only a nominal amount.

The scheme provides a general practitioner service free to all residents of the municipality for consultations and home visits. A surgery is usually attached to the district medical officer's house and branch surgeries are sometimes located elsewhere within the district. Attention out-of-hours is charged for in accordance with Medibank rates, as are insurance medical examinations and compensation treatment.

As well as general practice, activities include the dispensing of drugs if no chemist is available; duties as Medical Officer of Health (under the *Public Health Act*) if a municipal council requests it; in some cases duty as superintendent if there is a district hospital within the municipality; attention to district nursing hospitals; and post mortem examinations.

### *Pharmaceutical Services Section*

The Pharmaceutical Services Section has numerous advisory, supervisory and regulatory functions under regulations and legislation relating to narcotics, poisons, and dangerous and therapeutic drugs.

### *Alcohol and Drug Dependency Board*

This Board was established under the *Alcohol and Drug Dependency Act* 1969; its members are appointed by the Minister for Health from the medical, pharmaceutical, social service, police and legal professions. Its functions are: (i) to keep under review all matters relating to the prevention and treatment of alcohol and drug dependency; (ii) to advise on the declaration and control of substances as drugs under the Act; and (iii) to act as a board of appeal for applications by patients for discharge from treatment centres.

The treatment and rehabilitation of sufferers of alcohol and drug dependency are handled by the Mental Health Services Commission; the Commission's acute psychiatric units (at Wynyard, Devonport and Launceston), the Royal Derwent Hospital at New Norfolk, the Royal Hobart Hospital and the John Edis Hospital at New Town have been declared treatment centres.

### *State Drug Advisory Committee*

This advises on the nature, strength and variety of drugs to be supplied to public hospitals and institutions by the medical store of the Supply and Tender Department. It is not concerned with administration but helps the store to avoid stocking drugs with different names but similar properties, and drugs not likely to be required.

### *Nursing*

Nursing training is under the control of the Nurses' Registration Board. Of the State's nursing training schools, six are general, five are midwifery, one child health, one psychiatric and one geriatric. There are six general and one psychiatric training schools for auxiliary nurses (nursing aides).

### *Tourist Nursing Service*

This service is based on the fact that trained nursing sisters from outside Tasmania like to visit the State and have a working holiday. These 'tourist nurses' are employed for short periods in hospitals or district nursing centres. No more than two months service at any one time is required of a sister in any one place but she may stay longer.

## Division of Public Health

## General

The Division of Public Health has responsibility for the preventive medical services of the State. The Director is responsible for the operation of the *Public Health Act* 1962 (as amended) and the control of Medical Officers of Health and other health officers employed by the Department of Health Services and municipalities throughout the State. A major responsibility is public immunisation programs, conducted through the municipalities; preparations distributed include the Sabin anti-poliomyelitis vaccine and the triple antigen vaccine (against whooping cough, tetanus and diphtheria). The Division is responsible for the Nutrition Advisory Service; industrial hygiene; environmental sanitation; pure food and pure drug quality control; and the public health aspects of the building regulations. Other major functions are discussed separately in the following sections.

## Notifiable Diseases

Certain diseases are notifiable under the *Public Health Act* 1962, the aim being to prevent or check their spread. The following table shows the incidence of notifiable diseases in Tasmania for a six-year period:

Notifiable Diseases Reported to Department of Health Services, Tasmania  
(Number of Cases)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Brucellosis .....	—	—	—	—	1	—
Gonorrhoea .....	230	222	140	160	197	181
Hydatids .....	9	5	4	1	—	1
Infectious hepatitis .....	36	59	284	244	170	122
Leptospirosis .....	1	—	4	—	1	—
Malaria .....	1	2	1	1	1	1
Ornithosis .....	—	—	—	—	—	1
Salmonella infections .....	27	53	21	49	36	22
Serum hepatitis .....	1	—	1	—	—	1
Shigella infections .....	14	2	1	1	—	1
Syphilis .....	4	4	1	1	4	2
Tetanus .....	—	—	—	2	—	—
Tuberculosis .....	48	41	44	22	28	26
Typhoid fever (incl. paratyphoid) .....	—	1	—	—	—	1
Total .....	371	389	501	481	438	359

Special conditions apply to venereal diseases. Persons suffering from them must not marry until cured, or engage in the manufacture or distribution of foodstuffs, and are liable to arrest and detention if they fail to continue treatment until cured.

Quarantine provisions and tuberculosis are dealt with in later sections.

## Child Health Service

In 1979, there were 105 Child Health Centres and 15 travelling units. Triple Certificated Child Health Sisters attached to these centres advise mothers on all aspects of caring for babies and young children. They advise mothers on infant feeding, child development and other health and social problems that occur in the family. The sisters visit new born babies at home and continue the supervision either at home, or, more commonly, in the Child Health Centre where individual records are maintained. Sisters also arrange for examinations to be carried out by family doctors under the Pre-School Medical Scheme. Departmental Medical Officers carry out the examinations in Child Health Centres. Voluntary Child Health Committees working for the centres raise money for furnishing and equipping new centres which are usually built by the Department. They also meet running costs such as heating, lighting, cleaning and telephones.

*The Mothercraft Home:* This home, located in Hobart, provides training for qualified nursing sisters who want to gain child health nursing certificates and for women who want to become mothercraft nurses. It accommodates children under two years old who need care or who cannot be looked after at home, and mothers learning to look after children or having feeding problems. When space is available, children under two years old can be boarded in the Home for short periods.

#### *School Health Service*

This is available free to children attending government and independent schools from kindergarten to matriculation level. Each school is visited annually by school medical officers who fully examine children at entry and in their eleventh and fifteenth years. In addition, children known to have defects are reviewed and special examinations are arranged for children whose physical health, behaviour or educational progress may be causing concern. Every year about 30 000 children are examined by school doctors. About 20 per cent are found to have some defect, and these are referred to family doctors, specialists and hospital clinics and other appropriate agencies for investigation.

School nursing sisters visit schools regularly to supervise the health and hygiene of pupils. They maintain medical records, perform cleanliness inspections, test sight and hearing, assist at medical examinations and follow-up cases in which defects are diagnosed. They contribute to health education and research projects and may organise immunisation sessions at their schools.

#### *Handicap Assessment Centres*

Assessment Centres have been established in Hobart, Launceston and Burnie. The staff comprises medical officers, nursing sisters, psychologists, occupational therapists and welfare officers. Children referred to these Centres because of a known handicap or only suspected of having a handicap are assessed using a team approach. Specialists in other areas, e.g. education, mental health and specialist clinics in hospitals are consulted and asked to contribute to case conferences.

### **Mental Health Services Commission**

#### *Introduction*

Significant advances have been made in the field of clinical psychiatry and in the treatment of mental illness during the past three decades. The development of psychotropic drugs, new therapeutic techniques and improved methods of clinical practice have revolutionised the mental hospital from an institution for the incarceration of lunatics to a modern hospital geared to the care and rehabilitation of the sufferers of psychiatric disorders.

#### *Administration*

The Mental Health Services Commission was established under the *Mental Health Services Act 1967*, following an interdepartmental investigation into psychiatric services in Tasmania. The Commission comprises three members: a Medical Commissioner, a Clinical Commissioner (being Professor of Psychiatry at the University of Tasmania) and an Administrative Commissioner. Since 1 July 1968, the Commission has operated as a statutory authority, completely separate from the Department of Health Services.

Ultimately, the Mental Health Services Commission aims to provide integrated community services and to this end has established acute psychiatric units at Launceston, Wynyard and Latrobe. These regional units are closely linked to the public hospital complexes.

In September 1972, the Commission formally took over the Tasmanian Chest Hospital at Creek Road, Hobart and re-named the institution the John Edis Hospital. The facilities at this hospital have enabled the services for alcoholism and psychiatric disorders, formerly carried out at Clare House, New Town, to be expanded.

The principal institution under the control of the Commission is the Royal Derwent Hospital.

*Royal Derwent Hospital*

The Royal Derwent Hospital (at New Norfolk) is the State's principal centre for the treatment of psychiatric disorders and for caring for the mentally retarded. The hospital is divided into six sections and patients are allocated to the sections on the basis of their medical diagnosis. The basic division of patients is into those who are psychiatric patients and those who are suffering from mental sub-normality.

**Royal Derwent Hospital, Tasmania (a), Patients at 30 June 1979 by Mental Disorder: Summary**

Mental disorder	Number	Per cent	Mental disorder	Number	Per cent
Senile and pre-senile dementia . . . . .	73	9.6	Alcoholism . . . . .	39	5.1
Alcoholic psychosis . . . . .	22	2.9	Mental retardation . . . . .	314	41.3
Schizophrenia . . . . .	183	24.1	Other . . . . .	94	12.4
Affective psychoses . . . . .	35	4.6	Total . . . . .	760	100.0

(a) Includes Millbrook Rise Hospital.

The following table shows the diagnosis of mental illness of patients in the Royal Derwent Hospital (incorporating Millbrook Rise):

**Royal Derwent Hospital, Tasmania (a)  
Diagnosis of Mental Disorder of Patients, 1978-79**

Mental Disorder	Patients admitted (b) 1978-79			Patients at 30 June 1979		
	Males	Females	Total	Males	Females	Total
Senile and pre-senile dementia . . . . .	10	20	30	28	45	73
Alcoholic psychosis . . . . .	4	2	6	18	4	22
Psychosis with intracranial infection . . . . .	1	—	1	1	—	1
Psychosis with other cerebral condition . . . . .	6	3	9	7	13	20
Psychosis with other physical condition . . . . .	2	—	2	—	3	3
Schizophrenia . . . . .	61	40	101	112	71	183
Affective psychoses . . . . .	14	27	41	7	28	35
Paranoid states . . . . .	2	3	5	8	6	14
Other psychoses . . . . .	—	3	3	2	2	4
Neuroses . . . . .	4	17	21	4	12	16
Personality disorders . . . . .	33	32	65	15	10	25
Alcoholism . . . . .	167	17	184	32	7	39
Drug dependency . . . . .	2	—	2	—	—	—
Transient situational disturbances . . . . .	4	2	6	2	—	2
Mental disorders not specified as psychotic associated with physical conditions . . . . .	2	2	4	7	2	9
Mental retardation—						
Borderline . . . . .	2	5	7	4	2	6
Mild . . . . .	13	8	21	19	9	28
Moderate . . . . .	14	7	21	54	46	100
Severe . . . . .	7	13	20	60	59	119
Profound . . . . .	—	—	—	24	22	46
Unspecified . . . . .	—	—	—	13	2	15
Other . . . . .	9	10	19	—	—	—
Total . . . . .	357	211	568	417	343	760

(a) Includes Millbrook Rise Hospital.

(b) Excludes those returned from leave.

The following table shows the numbers of patients admitted and discharged and deaths in the Royal Derwent Hospital (including Millbrook Rise):



**Royal Derwent Hospital, Tasmania (a)**  
**Number of Patients Admitted and Discharged, and Deaths, 1978-79**

Particulars	Males	Females	Total
Patients at 30 June 1978 .....	402	342	744
Patients admitted—			
First time .....	121	72	193
Re-admitted (including statistical re-admissions) .....	236	139	375
Total .....	357	211	568
Patients discharged, etc.—			
Discharged from hospital .....	239	132	371
Statistical discharges .....	75	37	112
Died .....	28	41	69
Total .....	342	210	552
Patients at 30 June 1979 .....	417	343	760

(a) Includes Millbrook Rise Hospital.

NOTE: Statistical discharges are those patients who have not been officially discharged, but have been absent on leave from the hospital for more than 10 days. Should such persons require further hospitalisation, they are classified as 'Statistical re-admissions'.

### *Other Institutions*

**Hobart:** (i) The Combined Children's Centre in Hobart provides treatment to psychiatrically disturbed children. New referrals to the Centre during 1978-79 totalled 422.

(ii) In 1975 a Youth Counselling Service was commenced. Its objects include the care and psychiatric management of the adolescent with emphasis on family involvement.

(iii) The Quindalup Day Training Centre is located at New Town and provides a day training facility for retarded children. Attendances for 1978-79 totalled 3 917.

**Launceston:** (i) The Lindsay Miller Clinic at the Launceston General Hospital reported the following attendance figures during 1978-79: out-patient visits, 3 515; day patient visits, 3 240; in-patients, 630. Psychological consultations totalled 372 and social work consultations, 2 679. During the year an Alcohol & Drug Dependency Service was instituted and commenced operations from the Lindsay Miller Clinic. It is anticipated that during the forthcoming year this service will be transferred to separate quarters in the city.

(ii) The Elonera Handicapped Children's Centre opened in 1973 and provides a day facility to cater for the education and training needs of retarded children. Attendance figures for 1978-79 totalled 2 694.

(iii) The Wellington Street Clinic provides treatment similar to that provided at the Combined Children's Centre in Hobart and conducted 723 interviews for the year ended 30 June 1979.

**North-West:** In-patient facilities are provided at the Mersey General Hospital and the Spencer Division of the North-Western General Hospital.

Various centres provide facilities for out-patient treatment on the north-west coast. During 1978-79, the North Western General Hospital, Spencer Division, treated 773 out-patients; Burnie Division, 1 136; Smithton District Hospital, 223; Devonport and Ulverstone Clinics, 1 780.

The Child and Adolescent Service was commenced in October 1975 with headquarters at Burnie. The aims of the service are similar in nature to the Youth Counselling Service in Hobart.

### State Controlled Hospitals

#### General

In Tasmania, medical establishments include hospitals, nursing homes, geriatric establishments, convalescent homes, orthopaedic units, etc. Some are privately administered while the State Government accepts the major financial responsibility for others; in the case of the latter group, control is either direct or exercised through hospital boards.

Institutions controlled by the State include four general hospitals, 15 district hospitals, ten hospital annexes and district nursing centres with bed accommodation and six without, one mental hospital, two maternity hospitals and three hospitals for the aged. (The Department of Health Services directly administers one hospital for the aged.) These institutions could all legitimately be described as 'public'. However, in the tables in this section, the term 'public' is applied only to the general and district hospitals, the other types of institutions being specified separately.

#### General Hospitals (Public)

Hospitals providing all facilities and specialised treatment are the Royal Hobart, Launceston General, Mersey General (at Latrobe) and North-Western General (with divisions at Burnie and Wynyard). The Queen Alexandra (Hobart) and the Queen Victoria (Launceston) are maternity hospitals.

Specialist treatment is available at general hospitals in obstetrics, gynaecology, orthopaedics, urogenital surgery, plastic and reconstructive surgery, neuro-surgery and neurology, radiology, pathology, radiotherapy, psychiatry and ophthalmology; skin diseases and venereal diseases are also treated and clinics operate in thoracic medicine and surgery. An emergency obstetric service, with specialists based in Hobart and Launceston, provides a free service to the smaller public hospitals, district nursing hospitals and district medical officers outside the two cities.

The Lady Clark Hospital, an annexe of the Royal Hobart Hospital, is a rehabilitation and physiotherapy centre with both in-patient and out-patient facilities.

The Peacock Convalescent Hospital in Hobart is run by a committee of management, most of its patients being referred from the Royal Hobart Hospital.

#### Fees

As from 1 October 1976, the Tasmanian Government entered into an agreement with the Federal Government for the equal sharing of costs, on an approved budget basis, of net operating costs for all recognised hospitals under the *Commonwealth and State Hospital Services Agreement Act 1976*. This agreement replaced previous arrangements entered into from 1 July 1975 but which were later found to be invalid.

A public hospital patient is entitled to receive comprehensive care and treatment in hospital free of charge except in the following cases:

- (i) Hospitals may recover from the insurer, at specified rates, costs in respect of patients who may claim compensation or damages under workers compensation insurance or under the *Motor Accidents (Compensation and Liabilities) Act 1973*, or seamen covered by the *Navigation Act 1912*.
- (ii) An intermediate patient and a personal obstetric patient are permitted to have a choice of medical practitioner at the Royal Hobart Hospital; the patient pays the medical practitioner on a fee-for-service basis and an accommodation charge is payable to the hospital by the privately insured patient. A hospital service fee is levied by the hospital on the medical practitioner for the use of hospital resources in providing the fee-for-service.
- (iii) A patient of the Queen Alexandra Hospital (obstetrics) and Queen Victoria Hospital (obstetrics and gynaecology) may elect to be treated as a private patient and be treated by a medical practitioner of her choice on a fee-for-service basis and be charged by the hospital for accommodation in either a single room or other than a single room.
- (iv) As from 1 October 1976, privately insured patients treated by hospital staff have been charged an all-inclusive fee by the hospital for accommodation. Privately insured patients are also charged a medical service fee in the four general hospitals where they elect to be treated by the hospital doctors.

Out-patient charges in Public Hospitals for privately insured patients were introduced from 4 April 1979.

*State Controlled Hospitals: Finances and Patients*

The following tables give summaries of the financial operations and patient numbers of State controlled hospitals and hospitals for the aged:

**State Controlled Hospitals and Hospitals for the Aged, Tasmania**  
**Receipts and Payments (a), 1978-79**  
**(\$'000)**

Particulars	Hospitals (excluding mental)			Mental hospitals (d)	Hospitals for the aged
	Public (b)	Maternity (c)	Total		
<b>Receipts—</b>					
Government aid—					
State .....	31 478	1 687	33 165	8 837	3 760
Federal .....	31 489	1 687	33 176	89	3 757
In-patient fees .....	6 850	1 409	8 259	1 150	4 377
Out-patient fees .....	373	1	374	—	—
Other .....	3 039	194	3 233	220	1 122
<b>Total .....</b>	<b>73 229</b>	<b>4 978</b>	<b>78 207</b>	<b>10 296</b>	<b>13 016</b>
<b>Payments—</b>					
Salaries and wages .....	55 838	4 013	59 851	8 349	7 428
Provisions .....	2 066	182	2 248	(e)	594
Domestic supplies .....	1 862	108	1 970	(e)	211
Dispensary, etc. ....	4 850	185	5 035	(e)	85
Other .....	6 467	489	6 956	1 947	861
<b>Total .....</b>	<b>71 083</b>	<b>4 977</b>	<b>76 060</b>	<b>10 296</b>	<b>9 179</b>

(a) Excludes expenditure from State Loan Fund.

(b) Includes general and district hospitals; includes maternity wards in public hospitals.

(c) Excludes maternity wards in public hospitals.

(d) Refers to Royal Derwent Hospital incorporating Milbrook Rise.

(e) Not available on a comparable basis; included in 'Other'.

**State Controlled Hospitals and Hospitals for the Aged, Tasmania**  
**Staff, Accommodation and In-Patients**

Particulars	Hospitals (excluding mental)		Mental hospitals		Hospitals for the aged	
	1977-78	1978-79	1977-78	1978-79	1977-78	1978-79
Hospitals and homes .....	no. 22	23	1	1	3	3
Bed days .....	no. 546 405	535 455	279 955	270 830	271 195	273 750
Beds available .....	no. 2 235	2 238	950	880	891	886
<b>In-patients—</b>						
Total number treated .....	57 951	56 886	1 472	1 312	1 212	1 187
Daily average number of patients during year .....	1 497	1 467	767	742	743	750
<b>In-patient costs—</b>						
Total .....	\$'000 62 015	66 342	9 670	10 296	8 532	9 179
Daily average per patient .....	\$ 113.50	121.27	34.00	37.99	31.00	33.51

(a) Excludes nursing aides.

(b) Includes trained staff, auxiliaries and students.

(c) Includes students at St. John's Park Hospital.

*Hospitals for the Aged and Invalid***Government Hospitals for the Aged, Tasmania, 1978-79**

Hospital	Average daily number of inmates			Beds available			Total persons accommodated during year	Total bed-days
	General	Hospital	Total	General	Hospital	Total		
Cosgrove Park (a).....	113	140	253	136	144	280	392	92 328
St John's Park .....	15	452	467	20	555	575	752	170 305
Spencer Home for the Aged (b).....	6	25	31	6	25	31	43	11 264
Total .....	134	617	751	162	724	886	1 187	273 897

(a) Cosgrove Park is administered as part of the Launceston General Hospital.

(b) This is a geriatric wing of the Wynyard Division of the North-Western General Hospital (previously the Spencer Hospital).

The State Government administers three hospitals caring for the aged and for invalids. In the table above, the distinction is made between 'general' and 'hospital' beds; 'general' refers to beds available for inmates not receiving treatment in the hospital sections of the institutions.

A new rehabilitation centre is presently under construction at New Town. This centre will cater for a wide range of services, including in-patient services for children and adults requiring hospitalisation because of all forms of disablement e.g. spastic diseases, mental retardation, crippled children and other handicapped and disabled persons generally. Domiciliary and day-hospital therapeutic and home help facilities will still be based at St John's Park.

**District Hospitals (Public)**

These do not provide the diverse range of services available in the general hospitals, and do not have resident medical officers. They are located at Beaconsfield, Campbell Town, Currie, Franklin, Longford, New Norfolk, Ouse, Queenstown, Rosebery, St Helens, St Marys, Scottsdale, Smithton, Ulverstone and Whitemark.

**Private Medical Establishments**

There are 90 private medical establishments in Tasmania operated by charitable and church organisations and by private individuals or organisations. Most are concerned with care of the aged but five are hospitals with a more general purpose and one is a psychiatric hospital. Also, seven are used for the accommodation of physically and mentally handicapped persons. All 90 are registered under Part III of the *State Hospitals Act* but six are also registered under the Federal *National Health Act* and *Health Insurance Act* as hospitals. These are Calvary, St Johns, St Helen's and Hobart Clinic in Hobart, and St Lukes and St Vincent's in Launceston; all provide medical and surgical services except Hobart Clinic. Forty-three of the remaining establishments are licensed to provide nursing home care and 27 to provide accommodation for ambulant patients only.

The largest units in the non-hospital group are: Hobart Area, A.A. Lord Homes (111 beds), St Ann's Rest Home (126), Freemasons Home (126), Lillian Martin Home (126), Mary's Grange (91), Strathaven Lodge (117), Queen Victoria Home for the Aged (87); Launceston area, Nazareth House (103), Ainslie House (58); North-Western area, Meercroft Home for the Aged (96), Eliza Purton Home for the Aged (80).

**Government Analyst's Laboratory**

This laboratory analyses a wide variety of foods, drugs and other substances and undertakes work for Government departments and the public. Its work includes food and

agricultural chemistry, forensic chemistry and toxicology, analysis for industrial hygiene purposes, water and corrosion problems, and other matters such as blood alcohol examinations for *Road Safety (Alcohol and Drugs) Act* purposes.

### Other Health Matters

#### *Child Health Institutions*

These are medical institutions run by the State or subsidised by public funds. They provide treatment and supervision along with general education. The Sight Saving School, School for the Blind and Deaf, Talire (for retarded children) and Wingfield (for orthopaedic patients) are government institutions for children with particular defects.

#### *Ambulance Services*

The Interim Ambulance Authority co-ordinates services throughout the State and is responsible to the Minister for their effective operation. Ambulance Boards, centred on Hobart, Launceston, Devonport and Burnie, control services in the adjacent local government areas. A few municipalities, however, operate services outside the *Ambulance Act*. The total Government grant to ambulance services, both under Board and independent control, was \$1 773 985 in 1978-79.

Ambulance services under control of the four Boards provide free transport for ratepayers, occupiers and pensioners. In addition to receiving Government subsidies, their income is derived from fees (payable by visitors) and municipal grants.

The Ambulance Commission has adopted the training standards of the Victorian Ambulance Officers' Training School.

#### *Royal Flying Doctor Service*

This was established in Tasmania in 1960 and has as its purpose the provision of medical and dental services to persons in isolated areas. If the illness or injury is serious, a doctor flies to the patient and if necessary brings him back to hospital. The ambulance services receive the calls, make arrangements to charter aircraft and supply medical equipment. The Federal and State Governments make an annual grant towards operational expenses.

#### *Blood Transfusion Service*

Prior to 1954, the Australian Red Cross Society, which operates the service, was assisted only by the State Government; now a grant equal to 35 per cent of operating expenses is made by the Federal Government and a grant equal to 60 per cent of operating expenses by the State. The combined grant in 1978-79 was \$327 741.

#### *Municipal Health Functions*

Municipal councils and city corporations possess wide powers and responsibilities in public health. They organise triple antigen immunisation campaigns against diphtheria, whooping cough and tetanus, and vaccinations against poliomyelitis, smallpox, rubella and measles. (These are available without charge to children under 17 years.) They control the condemnation of sub-standard dwellings, the disposal of sewage, the provision of garbage and night soil services and the reticulation of water. A medical officer of health, often appointed by two councils, is responsible, among other things, for: inquiring into the causes, origins and distribution of diseases; investigating influences affecting the public health of the district; directing and supervising the municipal health inspectors in the execution of the *Public Health Act*; inspection of local certificates of notification of infectious disease and direction of control of such disease; reporting the existence of any nuisance; inspection of any animal carcass for sale for human consumption; and inspecting any premises where milk or milk products are produced or stored and for reporting on health of inmates or animals on the premises.

### Commonwealth Department of Health

#### *General*

The Department is concerned in Tasmania with the administration of the *Quarantine Act* 1908, the *National Health Act* 1953, the *Health Insurance Act* 1973 and the *Nursing Homes Assistance Act*, 1974; the control and maintenance of Pathology and National Acoustic

Laboratories at Hobart and Launceston; and co-operating with the State Departments of Health Services and Social Welfare and the Mental Health Services Commission in the Community Health Program and related activities.

### Quarantine

Quarantine guards against the importation *from overseas* of human, animal and plant infection. By arrangement, plant and animal quarantine is operated by the State Department of Agriculture. In general, *interstate movements* of animals and plants are left to the states, unless Commonwealth action is necessary for the protection of a state.

### Health Program Grants

These grants, under the *Health Insurance Act*, are generally paid to organisations providing services through medical and para-medical personnel remunerated on a salaried or sessional basis. An approved organisation is entitled to be paid an amount equal to the cost incurred by the organisation in providing the approved health service, including such part of the management expenses of the organisation as the Minister considers attributable to the provision of the health service

### Domiciliary Nursing Care Benefit

This benefit of \$2 per day (\$14 per week) is designed to help meet the cost of home nursing and other professional care for aged people who are chronically ill but being cared for in their own homes. It is payable to any person who provides continuous care for a patient in a private home provided the home is the usual residence of both the person and the patient and provided the patient meets certain medical criteria. The main eligibility rules are: (i) patients must be 16 years of age or more; (ii) patients must have an official certificate from their doctor stating that because of infirmity or illness, disease, incapacity or disability they have a continuing need for nursing care by a registered nurse; and (iii) patients must be receiving care by a registered nurse on an approved basis.

### Nursing Home Benefits

The *Nursing Homes Assistance Act* came into effect from 1 January 1975. Under this Act, religious and charitable nursing homes can elect to come under the provisions of that legislation which relate to 'deficit financing' of such nursing homes. These nursing homes submit a budget showing estimated operating receipts and payments and the estimated end of year deficit. The Commonwealth Government provides monthly advances against the anticipated deficit and a final settlement based on the actual deficit revealed in the audited end of year accounts. The Act prescribes a fee to be charged to patients (\$57.75 per week with effect from 8 May 1980.) and this may be varied by legislation. Arrangements exist for waiver or part-waiver of the prescribed fee in certain circumstances.

Those religious and charitable nursing homes which have not elected to come under provisions of the *Nursing Homes Assistance Act*, together with private gain nursing homes and government nursing homes, continue under the provisions of the *National Health Act*.

The benefits and patient contribution to fees in these nursing homes are given in the following table:

Nursing Home Benefit Rates (National Health Act), Tasmania  
(\$ Per Week)

Particulars	Ordinary care patients	Intensive care patients
Basic benefit from 8 November 1979 (a) .....	110.95	152.95
Patient's share of fees from 8 May 1980 .....	57.75	57.75
Total fee (b) .....	168.70	210.70

(a) Payable by the Commonwealth Government for persons who *have not* taken out basic hospital benefits insurance, and by approved hospital benefits organisations for persons who *have* taken out basic hospital benefits insurance with such organisations.

(b) 'Total fees' are the standard fees as determined by the Government at 8 May 1980. If fees actually charged are: (i) less than the standard fee, the basic benefit, shown above, is reduced by the difference; or (ii) greater than the standard fee, the patient's share, shown above, is increased by the difference.

Private gain nursing homes and those religious and charitable nursing homes, which have not elected to come under the provisions of the *Nursing Homes Assistance Act*, accept a fee control system and require departmental approval to vary their prescribed fees. The prescribed fees may differ between nursing homes because of the 'base' figure accepted for each nursing home when fees control was introduced on 1 January 1973 and because of continuing different costs between such homes. An independent fees review committee exists in each state to determine any appeals made by nursing homes against departmental decisions on fees.

#### *Pharmaceutical Benefits*

The Pharmaceutical Benefits Scheme, under the provisions of the *National Health Act*, provides a comprehensive range of drugs and medicinal preparations which may be prescribed by registered medical practitioners for persons receiving medical treatment in Australia. Under this scheme, basic rate pensioners receive their pharmaceutical requirements free of charge; non-pensioner patients are required to pay a patient contribution fee of \$2.75 (reviewable) for each benefit item received. National Health prescriptions are valid for six months from the date they are written.

#### *Pathology Laboratories*

These laboratories, situated in Hobart and Launceston, provide diagnostic services for medical practitioners and hospitals. A general clinical pathology service is offered, and the laboratories also perform serological services for the Red Cross Blood Transfusion Centre.

#### *National Acoustic Laboratory*

In Tasmania the National Acoustic Laboratory has centres in Hobart, Launceston and Bellerive. There are also regular visits to larger country centres. Hearing centre services involve evaluation and definition of an individual's auditory capacity (audiological assessment) and the improvement of the individual's auditory function through the fitting of an appropriate hearing aid together with supplementary rehabilitative measures (audiological rehabilitation).

National Acoustic Laboratory services are free to people under 21 years of age, aged and invalid pensioners and their dependants, Repatriation and Service pensioners and War Widows, Social Security rehabilitees and Armed Services personnel. Referral, except in the case of children, must be by an appropriate medical practitioner.

Three main types of 'Calaid' hearing aids are provided by the Laboratory: in-the-ear, behind-the-ear and body aids. Each type is made in a number of ranges of power to suit differing degrees of deafness, and each has been designed to allow ready acoustic and electronic modification of performance characteristics. This enables selective fitting for virtually every type of hearing loss, using a selection procedure developed by the Laboratory. In addition to Calaid's a limited number of imported spectacle aids are utilised in those few cases where the particular acoustic qualities of these aids is required.

#### *Isolated Patients Travel and Accommodation Assistance Scheme*

This scheme, which was introduced on 1 October 1978, operates under the *National Health Act* and in general provides financial assistance to patients, and escorts or attendants where necessary, who need to travel more than 200 kilometres from their home to obtain specialist medical treatment or services. Benefits include the refund of travel costs less \$20.00 per person and an accommodation allowance of up to a maximum of \$15.00 a night per person for overnight stays due to transport limitations and/or medical considerations.

## HEALTH INSURANCE

Up until 30 June 1975, health insurance in Australia was available only through registered private health insurance funds which provided various medical and hospital benefits schemes. Benefits paid to insured members of funds comprised a fund benefit, together with a Federal Government benefit. The Federal Government also provided benefits to pensioners and certain persons in needy circumstances (e.g. unemployed persons).

### **Introduction of Medibank**

On 1 July 1975, 'Medibank', a new medical and hospital health insurance program for all Australians, came into operation.

The original Medibank scheme operated for 15 months. It provided automatic cover for everybody in Australia without the necessity to continue paying contributions to private medical and hospital insurance funds in order to qualify for the Medibank benefits. On 1 October 1976, new health insurance arrangements came into operation when the previous Medibank scheme was revised as a result of the recommendations of the Medibank Review Committee. Under the new arrangements all persons were required to make direct contributions for their health insurance cover, with special arrangements to exempt most pensioners and low income earners from payment. Under the new scheme, every person had the choice of paying either: (i) a levy of 2.5 per cent on taxable income, known as the health insurance levy (imposed from 1 October 1976), up to a ceiling amount set at \$300 per annum for families or \$150 per annum for single people, which provided 'Medibank Standard' cover; (ii) contributions to 'Medibank Private'; or (iii) contributions to a registered private health insurance organisation which provided benefits that were at least equivalent to those of Medibank Standard.

### **Changes to Health Insurance Since 1 September 1979**

The following arrangements have applied since 1 September 1979.

#### ***Medical Benefits***

All patients other than Pensioner Health Benefit card holders and disadvantaged people (see below) are responsible for medical costs up to a Schedule fee of \$20.00. The Schedule fee is the fee agreed on in negotiations between the Government and the Australian Medical Association, or determined by an independent inquiry, as being the fair and reasonable fee for any particular service for medical benefits purposes, or determined by the Medical Benefits Advisory Committee.

Where the Schedule fee is above \$20.00 the patient is required to pay \$20.00 and the Commonwealth is responsible for the balance of the Schedule fee. People with medical insurance can claim part or all of these costs from their private health fund (depending on the cover for which they have insured) but uninsured patients are required to meet the costs up to \$20.00 per service entirely out of their own pockets.

#### ***Pensioner Health Benefit Card Holders***

Pensioners with Pensioner Health Benefit entitlements and the dependants of such pensioners are eligible to receive medical benefits from the Government at 85 per cent of the Schedule fee for each medical service. The maximum patient payment is \$5 for any one service where the Schedule fee is charged. The benefit is paid as a Commonwealth benefit.

A bulk-billing facility for these persons is available. Claims are processed by the Commonwealth Department of Health.

#### ***Bulk-Billing for Disadvantaged Persons***

Bulk-billing arrangements are available in respect of persons identified by medical practitioners as disadvantaged. Medical practitioners may bulk-bill the Commonwealth for all services rendered to such persons (provided the patient is not privately insured) and receive 75 per cent of the Schedule as full payment for the service and are not permitted to recover any further amount from such patients.

#### ***Hospital Benefits***

The cost of accommodation in public hospitals is \$50.00 per day for a shared room and \$75.00 for a private room. Patients without hospital insurance are entitled to standard ward accommodation in recognised hospitals at no charge with treatment by doctors engaged by the hospital.

#### ***Health Insurance***

Registered Medical and Hospital Benefits organisations offer a basic medical benefits table providing coverage for 75 per cent of the Schedule fee, with a maximum payment by the patient of \$10.00 for any one service where the doctor charges the Schedule fee. The organisations also provide a basic hospital benefits table covering accommodation in shared



rooms of public hospitals (at the charge of \$50.00 a day) with doctor of choice (currently available at the Royal Hobart Hospital, Queen Alexandra Maternity Hospital, Hobart, and Queen Victoria Maternity Hospital, Launceston) or with doctors engaged by the hospital. In the latter circumstances a professional services fee of \$25.00 a day is charged to hospital insured patients. The benefits provided under the basic hospital benefits table cover this fee in addition to the accommodation charge. Organisations offer supplementary and ancillary benefits.

### Optometrical Services

The arrangements outlined above for medical benefits also apply to those Optometrical Services covered by the Government's Medical Benefits Schedule.

### Long-Stay Hospital Patients

To classify as a 'nursing-home type patient' patients must have been hospitalised for a continuous period exceeding 60 days unless a medical practitioner certifies that the patient is, and will continue to be for a specific period, in need of acute care, professional attention for an acute phase of the patient's condition, active rehabilitation or continued management, for medical reasons, as an in-patient. 'Nursing-home type patients' will be required to make a specified 'patient contribution' towards the cost of their hospitalisation and will not be able to cover that contribution through insurance. The legislation provided that the 60 day period was to commence on or after 1 July 1979 but because of the necessity to amend the *Commonwealth and State Hospital Services Agreement*, the commencement date for the 60 day period was deferred to 1 July 1980 in Tasmania.

## HOSPITAL MORBIDITY

In the following tables particulars are given of all in-patients treated in Tasmanian public hospitals during 1978. Patients still in hospital at the end of 1978 will be included in figures for the year in which they leave hospital. Normal maternity patients are included, but babies born in hospital are included only if they receive treatment in excess of that routinely provided for the new-born.

### Treatment Statistics

The following table analyses patients by age group and length of stay in hospital:

Patients Treated in Public Hospitals, Tasmania: By Age Group and Average Length of Stay, 1978

Age group	Males			Females		
	Number	Per cent of total	Average length of stay (days)	Number	Per cent of total	Average length of stay (days)
Days—						
Under 28 .....	380	1.62	8	270	0.89	8
28-365 .....	691	2.96	6	507	1.67	8
Years—						
1-4 .....	1 615	6.92	4	1 054	3.48	4
5-9 .....	1 296	5.56	4	985	3.25	4
10-14 .....	1 013	4.34	5	893	2.95	5
15-19 .....	1 439	6.13	6	2 773	9.16	6
20-24 .....	1 365	5.85	7	4 643	15.34	6
25-29 .....	1 098	4.71	7	4 137	13.67	6
30-34 .....	953	4.09	7	2 547	8.41	6
35-39 .....	918	3.94	7	1 441	4.76	7
40-44 .....	879	3.77	8	1 037	3.43	8
45-49 .....	1 046	4.48	9	1 076	3.55	9
50-54 .....	1 469	6.30	10	1 210	4.00	9
55-59 .....	1 680	7.20	10	1 256	4.15	10
60-64 .....	1 769	7.58	12	1 278	4.22	11
65-69 .....	1 816	7.79	13	1 324	4.37	14
70-74 .....	1 588	6.80	15	1 234	4.08	14
75 and over .....	2 312	9.92	21	2 607	8.61	23
Total .....	23 327	100.00	10	30 272	100.00	9

Accidents and violence were the main causes of hospitalisation of males in the 15-34 years age group. Separations with external causes accounted for 2 006 male patients in the age group 15-34 years (41 per cent) but for only 683 female patients in this age group.

The next table analyses the patients shown in the previous table by condition treated and by length of stay:

**Patients Treated in Public Hospitals, Tasmania: By Condition Treated and Average Length of Stay, 1978**

Principal condition treated	Males			Females		
	Number of patients	Total days in hospital	Average stay (days)	Number of patients	Total days in hospital	Average stay (days)
Infective and parasitic diseases .....	751	4 272	6	687	3 096	5
Neoplasms .....	1 675	20 359	12	1 713	20 835	12
Endocrine, nutritional and metabolic diseases .....	309	4 293	14	431	6 228	14
Mental disorders .....	1 087	15 474	14	1 155	19 818	17
Diseases of the—						
Blood and blood forming organs .....	213	1 547	7	216	1 527	7
Nervous system and sense organs .....	1 087	12 067	11	932	9 706	10
Circulatory system .....	3 060	41 287	13	2 452	34 588	14
Respiratory system .....	2 637	18 625	7	1 728	10 202	6
Digestive system .....	2 379	18 026	8	1 973	15 349	8
Genito-urinary system .....	1 134	9 029	8	2 830	14 893	5
Skin and subcutaneous tissue .....	476	3 655	8	368	3 283	9
Musculoskeletal system and connective tissue .....	1 143	12 911	11	955	11 558	12
Congenital anomalies .....	376	2 581	7	260	2 004	8
Childbirth, complications of pregnancy and the puerperium (a) .....	..	..	..	8 638	59 970	7
Certain causes (b) of perinatal morbidity and mortality .....	282	3 486	12	254	2 957	12
Symptoms and ill-defined conditions .....	1 812	20 065	11	1 858	22 944	12
Accidents, poisoning and violence .....	4 254	34 461	8	2 433	26 507	11
Other special admissions or consultations .....	652	3 456	5	1 389	6 670	5
Total .....	23 327	225 594	10	30 272	272 135	9

(a) Includes supervision of normal pregnancy.

(b) Includes toxæmia of pregnancy, conditions of placenta, birth injury, etc.

Comparable treatment statistics (in total only) for 1977 were: (i) number of in-patients treated in public hospitals—males, 22 784 and females, 30 206; (ii) average stay in hospital—males, 10 days and females, 9 days; and (iii) total days in hospital—males, 227 615 and females, 270 568.

Examination of the above table reveals that the seeming imbalance between total male and total female patients is largely accounted for by one classification: 'Childbirth, complications of pregnancy and the puerperium'. When data under this classification are eliminated, total figures are as follows:

**Patients Treated in Public Hospitals, Tasmania (a), 1978**

Particulars	Males	Females
Number of patients .....	23 327	21 634
Total days in hospital .....	225 594	212 165

(a) Excluding the category 'Childbirth, complications of pregnancy and the puerperium'.

The most significant classification affecting males is 'Accidents, poisoning and violence', where males outnumber females nearly two to one. One factor is the greater exposure of males to industrial and road traffic accidents. For females, the most significant classification (not including 'Childbirth, complications of pregnancy and the puerperium') is 'Diseases of the genito-urinary system' where females outnumber males nearly five to two.





Australian Football at North Hobart Oval

*[Tasmanian Film Corporation]*

Sandy Bay and Mt Wellington



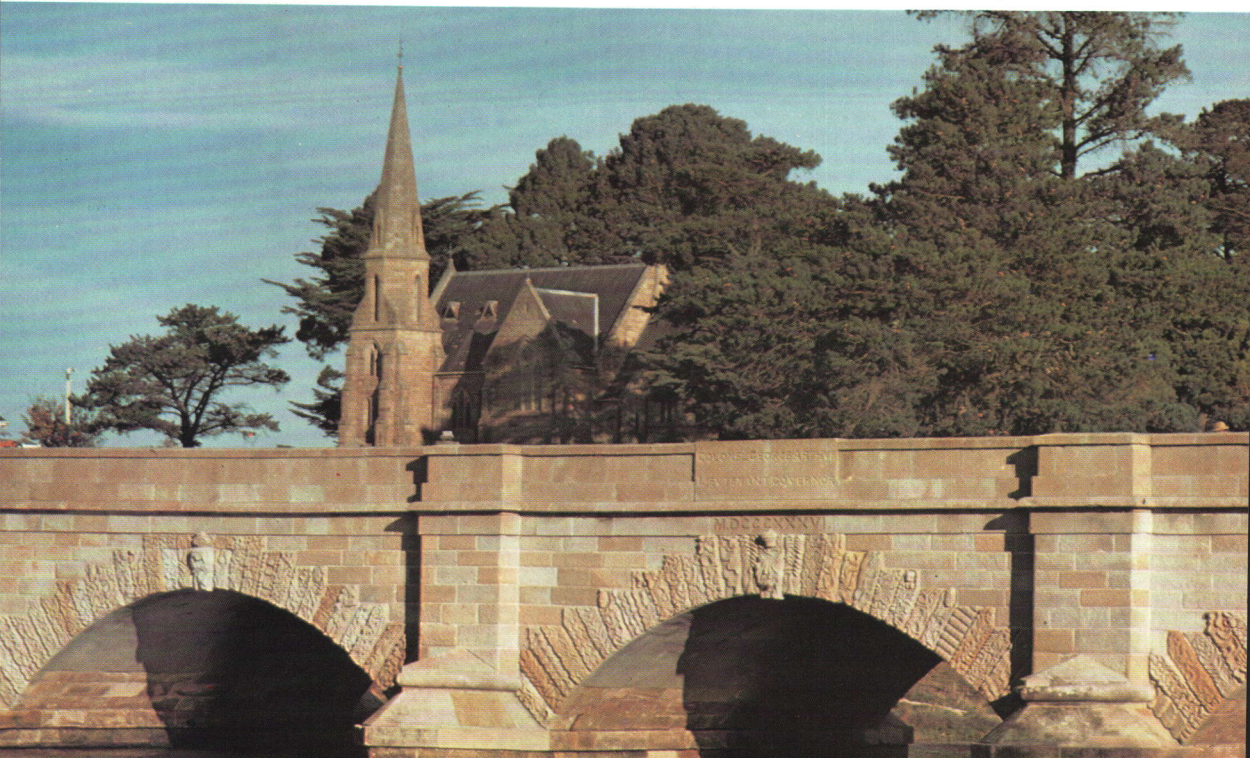




Holy Trinity, Roman Catholic Church, Westbury

*[Edward Gall]*

Ross Bridge



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## Chapter 16

### LAW, ORDER AND PUBLIC SAFETY

#### LAW IN TASMANIA

Following British colonisation of Van Diemen's Land from 1803, a system of law and courts based on the Imperial system was established in the Colony. A description of the origin and evolution of Tasmanian law is included in the 1976 and earlier editions of the *Year Book*. This section describes the present system of law operating in the State.

#### The Criminal Law of Tasmania

In 1924 the *Criminal Code Act*, which codified and brought together the criminal law of Tasmania, was passed. This Act embodied the State's criminal law in the form of a code which was made a schedule to the 1924 legislation.

As a result of a review of the State's criminal law the *Criminal Code Act* 1973 was passed by Parliament. This statute embodied many important amendments to the Criminal Code; most of the changes stemmed from recommendations made by the Law Reform Committee of Tasmania. Among the more important changes were:

- (i) Repeal of the distinction between burglary and housebreaking. Prior to the 1973 Act the Criminal Code had perpetuated an archaic distinction between burglary which was committed at night and housebreaking which was committed by day.
- (ii) The more serious offence of aggravated burglary (i.e. where a person uses or carries a firearm or offensive weapon or uses force in the commission of a burglary) was incorporated in the code.
- (iii) A new offence of kidnapping was included.
- (iv) A section covering bomb threats was written into the legislation.
- (v) The infanticide provisions were extended to cover mothers of children up to 12 months of age.
- (vi) Section 269A has been added to make it a crime to cause a fire with intent to injure a person or property.

The *Crimes (Offences at Sea) Act* was enacted in 1979. This Act concerns offences committed at sea, matters of jurisdiction and related aspects.

Since passage of the *Criminal Code Act* 1973 further amendments have been made. The more important are as follows:

- (i) The provisions of the code relating to nuisance have been revised and expanded to complement the *Environment Protection Act* 1973.
- (ii) The power of a judge to order whipping as a punishment for violent crimes has been abolished.
- (iii) Section 124 has been amended to make it a crime to have unlawful carnal knowledge of a girl under 17 years of age, i.e. the 'age of consent' was lowered from 18 years to 17 years. Consequently, amendments were also made to a number of other sections of the Code.
- (iv) Section 334 has been amended to make it a crime to cause the death of a person by dangerous driving.



- (v) Section 185 has been amended to the effect that committal proceedings in respect of a charge of rape are to be heard by a Magistrate sitting alone and are to be heard in closed court unless the Magistrate otherwise directs.

### Juries

Tasmanian legislation regulating juries seems to have been first passed in 1830 although, for many years before that date, the introduction of the British system of trial by jury in civil and criminal cases had been persistently urged in the Colony. The *Hobart Town Gazette* shows that juries had been employed in the Colony for the trial of criminal cases from the establishment of the Supreme Court in 1824. Juries remain as the tribunal for trying indictable criminal cases and there is limited right to a jury in civil actions, although in 1935 they were abolished for the purpose of trying motor accident cases.

Although the Tasmanian jury system was based on the English system it has, since 1934, embodied the principle of allowing *majority* decisions in certain circumstances instead of requiring the *unanimous* decisions once characteristic of jury usage in England and most other countries.

Civil cases have a seven-member jury and, if after three hours deliberation a seven-nil decision cannot be reached, a five-two decision is accepted. If the minimum five-two decision cannot be reached after four hours, the jury may be discharged.

In criminal cases, similar principles apply except that a 10-2 decision is accepted in lieu of 12-nil after stipulated periods of deliberation. In the case of murder, 12-nil is necessary to convict, but 10-2 can bring in a verdict of not guilty, or not guilty of murder but guilty of a lesser crime.

### The Present Law Court System

#### *Courts of Petty Sessions*

For particular municipalities in the State, there is a Court of Petty Sessions. The Court is constituted by a magistrate (who must have been a legal practitioner or barrister for not less than five years) or by two or more lay justices. In major centres of population, a Court sits regularly and, in smaller centres, a Court sits less frequently or is convened as occasion requires.

A Court of Petty Sessions has jurisdiction over all summary offences and also over certain indictable offences at the option of the defendant. Under the *Justices Act 1959*, a defendant may choose summary trial in the Court of Petty Sessions when charged with the following crimes: (i) Escape or rescue; facilitating escape of a prisoner or harbouring an offender; assisting escape of a criminal lunatic; rescuing goods legally seized; making a false declaration (or statement). (ii) Stealing; killing an animal with intent to steal; unlawfully branding an animal; obtaining goods by false pretence; cheating; fraud in respect of payment for work; receiving stolen property. (In all these cases the value of the property concerned must exceed \$100 but not \$1 000. If the value does not exceed \$100 the defendant will be tried summarily. If it exceeds \$1 000 he will be committed for trial in the Supreme Court.) (iii) Breaking a building other than a dwelling-house. (It is necessary for the defendant to be committed to the Supreme Court for trial where it is alleged that in the commission of the offence: property to the value of more than \$1 000 has been stolen; violence has been used or offered to any person in or about the building; the person had in his possession a gun, pistol, dagger, cosh, or other offensive weapon; explosives were used; or the defendant intended to commit a crime other than stealing.) (iv) Forgery; uttering. (The complaint must be for an offence in respect of a cheque for not more than \$1 000.)

The following tables show the number of cases tried in the lower courts. (Minor traffic offences settled without court appearance are excluded.)

## Cases Tried in Lower Courts, Tasmania

Offence		1974	1975	1976	1977	1978	1979
Offence against—							
The person	Males	1 319	1 082	869	704	703	633
	Females	38	64	53	37	63	21
Property	Males	4 989	4 500	4 274	4 489	5 492	5 613
	Females	361	571	449	565	474	788
The currency	Males	303	276	232	153	521	168
	Females	80	78	129	101	55	95
Good order	Males	3 412	3 810	2 839	2 329	2 138	2 282
	Females	191	174	185	92	111	153
Traffic regulations	Males	27 291	29 680	28 711	26 922	26 719	28 052
	Females	1 884	2 353	2 782	3 127	3 258	3 849
All other offences (a)	Males	7 188	8 210	7 789	5 854	4 944	5 577
	Females	930	1 563	1 193	762	627	450
Total offences	Males	44 502	47 558	44 714	40 451	40 517	42 325
	Females	3 484	4 803	4 791	4 684	4 588	5 356

(a) Includes offences mainly related to liquor, education, neglected children, revenue, gambling suppression laws, desertion of wives and children, perjury and subornation, and conspiracy.

## Lower Courts, Tasmania, 1979

Offence	Cases tried	Results of trials				
		Convictions	Committed to higher courts	Adjourned sine die	Dismissed or withdrawn (a)	Remanded
MALES						
Offences against—						
The person . . . . .	633	405	125	19	84	—
Property . . . . .	5 613	4 486	733	58	336	—
The currency . . . . .	168	96	60	6	6	—
Good order . . . . .	2 282	1 992	4	60	226	—
Traffic regulations . . . . .	28 052	23 857	1	1 009	3 185	—
All other offences (b) . . . . .	5 577	4 807	43	214	513	—
Total . . . . .	42 325	35 643	966	1 366	4 350	—
FEMALES						
Offences against—						
The person . . . . .	21	16	2	—	3	—
Property . . . . .	788	675	32	8	73	—
The currency . . . . .	95	25	70	—	—	—
Good order . . . . .	153	137	—	4	12	—
Traffic regulations . . . . .	3 849	3 082	—	46	721	—
All other offences (b) . . . . .	450	364	—	17	69	—
Total . . . . .	5 356	4 299	104	75	878	—
PERSONS						
Total . . . . .	47 681	39 942	1 070	1 441	5 228	—

(a) 'Dismissed' is equivalent to 'not guilty' in higher courts.

(b) Includes offences mainly related to liquor, education, neglected children, revenue, gambling, desertion of wives and children, perjury and subornation, and conspiracy.

## Courts of Request

These are constituted as courts with civil jurisdiction for particular municipalities in accordance with the authority given by the *Local Courts Act* 1896. Courts are held before a commissioner who is usually a magistrate. The Attorney-General fixes the dates on which



these courts sit. Every Court has jurisdiction throughout the State but a plaintiff may have his action struck out if he brings it in a Court other than the Court having jurisdiction, i.e. the Court nearest to which the cause of action arose. In such circumstances the plaintiff may lose costs.

The jurisdiction of a Court of Requests, which is a court of record, covers all personal actions where the debt or damage claimed does not exceed the maximum amount fixed under the Act. Since 1 November 1966, the sum of \$1 500 has been fixed as the maximum jurisdiction for a Court of Requests in respect of a debt or liquidated sum, and \$1 000 in any other case.

The Commissioner alone determines all questions of fact as well as of law and his decision is the judgment of the Court, unless a jury is required. In any action either party may require a jury as of right and there is power for the Commissioner to order that an action be tried by a jury, even though neither party has required it. Law and equity are administered concurrently in the Court and the general principles or practice in the Supreme Court are adopted and applied in cases not expressly provided for in the Act or Rules.

#### *Courts of General Sessions*

Courts of General Sessions, constituted under the *Local Courts Act 1896*, have been progressively discontinued since 1978 in conjunction with the transfer of local government courts to State administration which was completed in August 1980.

#### *The Supreme Court of Tasmania*

The Supreme Court of Tasmania is constituted by the Chief Justice and five Puisne Judges. Regular sittings of the Court are held at Hobart, Launceston and Burnie, although the Court is empowered, subject to the provisions of the *Supreme Court Civil Procedure Act 1932*, to sit and act at any time and at any place for the exercise of any part of the jurisdiction and business of the Court.

The Court has jurisdiction over all causes, both civil and criminal, except those reserved for the High Court of Australia under the Australian Constitution. It also exercises federal jurisdiction in matters such as bankruptcy, etc. Its civil jurisdiction extends to all causes of action, whatever the amount involved may be, and its criminal jurisdiction includes the trial of all indictable offences. In civil cases, the Court has power to call in the aid of one or more assessors specially qualified to assist in the trial of the actions, but it is not bound by the opinion or advice of any such assessor.

The following table shows the number of convictions, by offence, in the Supreme Court of Tasmania during 1979 and 1980:

Supreme Court Convictions, Tasmania (a)

Offences	1979		1980	
	Males	Females	Males	Females
Offences against the person—				
Murder .....	4	3	3	—
Attempted murder .....	1	—	—	—
Manslaughter—Other than while driving .....	—	—	—	—
While driving .....	4	—	—	—
Dangerous or negligent driving .....	10	—	9	—
Rape .....	2	—	12	—
Other unlawful carnal knowledge .....	5	—	2	—
Incest .....	1	—	—	—
Other offences against females .....	13	—	10	—
Indecent practices between males .....	—	—	4	—
Unnatural carnal knowledge .....	2	—	2	—
Robbery .....	16	—	9	—
Malicious wounding .....	6	—	7	—
Aggravated assault .....	3	—	1	—
Common assault .....	13	—	22	—
Other offences against the person .....	3	—	2	—

## Supreme Court Convictions, Tasmania (a)—continued

Offences	1979		1980	
	Males	Females	Males	Females
Offences against property—				
Burglary; break and enter; break, enter and steal .....	65	—	53	4
Receiving, including possession of stolen goods .....	7	—	2	—
Fraud and false pretences .....	16	4	24	4
Arson, n.e.i. ....	8	1	3	2
Stealing .....	42	1	21	3
Other offences against property .....	7	2	—	—
Forgery and offences against the currency .....	1	2	18	2
All other offences .....	14	1	18	—
Total (b) .....	243	14	222	15

(a) Conspirators, aiders, abettors and accessories are shown under the offence they allegedly conspired to commit, aid, etc. Except for murder, offences include attempts. The offences shown are those alleged to have been committed. The numbers therefore include some instances where the person is found guilty of the alternative.

(b) There are fewer Supreme Court Cases tried than the number committed from the lower courts would lead one to expect. This is because: (i) *complaints* often embrace several *offences* in the lower courts; (ii) some cases are not proceeded with. Higher Court cases often proceed under different offence titles from those under which the lower court committals were made.

The following table shows the number of convictions in the higher courts over a six-year period:

## Supreme Court Cases: Convictions, Tasmania

Offences	1975	1976	1977	1978	1979	1980
Offences against—The person .....	112	96	86	79	86	83
Property .....	211	159	98	138	153	116
Forgery and offences against the currency .....	14	11	21	10	3	20
All other offences .....	10	20	12	8	15	18
Total .....	347	286	217	235	257	237

There is a right of appeal to the Supreme Court of Tasmania from all inferior courts and from many statutory tribunals.

Law and equity are administered concurrently in the Court which is enjoined to grant, either absolutely or on such terms and conditions as seem just, all such remedies to which any of the parties may be entitled so that, as far as possible, all matters in controversy between the parties may be completely and finally determined, and a multiplicity of legal proceedings avoided. The judges, on the recommendation of the Rule Committee, are empowered to make rules regulating the practice and procedure of all proceedings in the Court.

The jurisdiction of the Court is usually exercised by a judge of the Court and from his decision there is a right of appeal to the Full Court of the Supreme Court of Tasmania. A Full Court consists of three or more Judges of the Court. The Full Court is also a Court of Criminal Appeal under the Criminal Code. The latter is a Court to which appeals may be brought by the Crown or by an accused person where an indictable offence is involved. In some cases, there is an appeal as of right but, in other cases, leave is required.

*The High Court of Australia*

This Court was created by the Constitution of the Commonwealth of Australia and it has both original and appellate jurisdiction. It is constituted by the Chief Justice of Australia and six other Justices.

Except in relation to an appeal that relates to the amount of any damages in respect of death or personal injury, there is a right of appeal to the High Court from a final judgment of

a Full Court of the Supreme Court of the State in any civil matter where the sum involved amounts to at least \$20 000. In other cases (including criminal cases) there is an appeal to the High Court if special leave is granted.

Sittings of the High Court of Australia are held in Canberra. Provision is made, when there is sufficient business to warrant convening a sitting of the Court in Hobart, for the Court to travel to Hobart for the sittings.

### *The Federal Court of Australia*

The Court created by the *Federal Court of Australia Act 1976*, is constituted by the Chief Judge and 23 other judges. The Court was created basically to reduce the work of the High Court, so that the High Court could give greater attention to its primary function as the interpreter of the Constitution. Consequently, the Federal Court was invested with original and appellate jurisdiction under a variety of statutes including the *Conciliation and Arbitration Act 1904*, the *Bankruptcy Act 1966*, the *Trade Practices Act 1974* and the *Administrative Appeals Tribunal Act 1975*. Sittings of the Court are held in each capital city—there is a District Registry in each.

### *Tribunals*

There are many tribunals which are not true courts and the powers and functions of these depend upon the detailed provisions of the particular statute under which they operate. Certain specialised courts have been created by statute. For example, the Wardens' Court is constituted under the *Mining Act 1929*.

### *Coroners' Courts*

Coroners are appointed by the Governor and have jurisdiction throughout the State. Under the *Coroners Act 1957*, a coroner may hold an inquest: (i) Concerning the manner of death of any person who has died a violent or unnatural death, who died suddenly without the cause being known, or who died in a prison, or mental institution; at the direction of the Attorney-General, he may also be required to hold an inquest concerning any death. (ii) Concerning the cause of any fire if the Attorney-General has directed, or has approved a request by the owner or insurer of the property; or at the request of the State Fire Authority or the Rural Fires Board.

The coroner usually acts alone in holding an inquest, but either the Attorney-General or the relatives of the deceased may request that a four or six-man jury be empanelled. After considering a post-mortem report the coroner may dispense with an inquest, unless the circumstances of death make an inquest mandatory under the Act.

The duty of the Court is to determine who the deceased was, and the circumstances by which he came to his death. Medical practitioners and other persons may be summoned to give evidence. In the case of the death of an infant in a nursing home, the coroner may also inquire generally into the conditions and running of the institution. On the evidence submitted at the inquest, the coroner can order a person to be committed to the Supreme Court and can grant bail. In the case of murder, a coroner can issue a warrant for apprehension.

### *Children's Courts*

A 'child' in this jurisdiction is one under the age of 17 years. The Court before finally disposing of the case, must receive a report from a child welfare officer (the representative of the Director of Social Welfare), unless the Court considers the offence trivial or the Director decides not to provide one. A child's parent has the right to be heard and to examine and cross-examine witnesses, or to be represented by counsel; also a parent can be compelled to attend the hearing if this imposes no unreasonable inconvenience.

In summary proceedings, the Court is compelled not to enter a conviction against a child unless it imposes a sentence of imprisonment or there are special circumstances which indicate that a conviction should be recorded.

Children under 16 years cannot be sentenced to imprisonment and children of 16 years cannot be sentenced for more than two years, in aggregate. Minimum penalties imposed by statute do not apply to children; for those under 14 years the maximum fine is \$20, and for those over 14 years, \$100. The Court may impose a supervision order to bring the child under the guidance of a child welfare officer or, if over 15 years, of a probation officer.

Alternatively, the Court may declare the child a ward of the State, placing him under the control of the Director of Social Welfare until his eighteenth birthday, unless released sooner; it may also direct that a ward be committed to an institution. In cases where further investigation appears necessary the Court may issue a remand for an observation order before it makes a final decision. Remands for observation orders are for short periods and usually provide for intensive supervision. (In the case of delinquency the maximum period for such an order is three months.)

Neglected or uncontrolled children are in the Court's jurisdiction; it may make a supervision order; an interim order (similar to a remand for observation order, the effect being to defer the transfer of guardianship until it is apparent that there is no suitable alternative); or impose wardship or bind the parents over to provide proper care and control, and comply with other directions. If parents have contributed to a child's offence, by failing to control the child, they may also be charged, convicted, fined, ordered to pay for damage and obliged to enter into a recognizance for the good behaviour of the child for up to 12 months.

Unlike a Children's Court the Supreme Court is in no way inhibited in imposing a penalty on a child. In addition to its ordinary sentencing powers, it may make supervision or wardship orders, and commit a child to an institution. If a child is sentenced to imprisonment, the responsible Minister may direct that the sentence be served in a place other than a gaol.

Statistics showing numbers of children appearing before Children's Courts by age, sex and alleged offence are given in the next two tables:

**Children Appearing Before Children's Courts, Tasmania(a), 1977-78**  
Classified by Age and Sex

Sex	Age (b) (in years)										Total (c)
	Under 8	8	9	10	11	12	13	14	15	16	
Boys .....	6	6	5	22	38	57	117	224	370	856	1 769
Girls .....	14	2	7	2	8	22	30	64	79	130	365
Total	20	8	12	24	46	79	147	288	449	986	2 134

(a) A child appearing twice or more before the Courts will appear twice or more in the table.

(b) Ages are at time of court hearing, not at time of offence.

(c) Includes 75 children (68 boys and 7 girls) who were 17 years old when appearing before the Courts but 16 at the time the alleged offences were committed.

**Children Appearing Before Children's Courts, Tasmania(a)**  
Classified by Offence

Offence alleged	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Relatively serious offences—						
Damage to property .....	117	153	153	167	160	106
Breaking, entering and stealing .....	355	385	354	325	436	300
Stealing .....	433	578	586	616	619	391
Receiving .....	16	35	21	26	18	19
Illegal use of vehicles .....	209	285	224	292	207	131
Offences involving fraud .....	12	8	10	5	2	—
Sex offences .....	27	18	30	15	17	14
Other offences against the person .....	93	129	60	52	97	28
Offences against decency .....	49	6	15	10	18	14
Total .....	1 311	1 597	1 453	1 508	1 574	1 003

**Children Appearing Before Children's Courts, Tasmania(a)**  
**Classified by Offence—continued**

Offence alleged	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Other offences—						
Disorderly conduct .....	65	126	77	81	46	117
Traffic offences .....	481	661	710	634	508	498
Breaches of—Licensing laws .....	689	591	509	474	439	362
By-Laws .....	4	12	11	2	5	6
Firearms offences .....	36	19	28	9	29	33
Gaming .....	80	49	31	8	2	11
Trespass .....	18	57	49	27	14	13
Other .....	93	170	157	95	81	9
Total .....	1 466	1 685	1 572	1 330	1 124	1 049
Complaints under Child Welfare Act—						
Appearing as—Uncontrolled .....	122	48	53	32	20	12
Neglected .....	196	332	90	100	176	57
Breaches of supervision .....	12	28	9	8	8	13
Total .....	330	408	152	140	204	82
Total, of all offences .....	3 107	3 690	3 177	2 978	2 902	2 134

(a) A child appearing twice or more will appear twice or more in the table.

In the preceding table, the figures relate to actual prosecutions. Where a report concerned multiple offences, the apparently more serious one has been listed. However, a child may be included more than once if more than one report has been made.

The following table shows the number of children found guilty of an offence or against whom a complaint has been proven. The basis for inclusion is different from that in the two earlier tables:

- (i) a child found guilty at two or more appearances is only counted once; and
- (ii) a child found guilty of more than one offence is classified under the more serious.

**Individual (a) Children: Findings of Guilty, or Complaint Proven, Tasmania, 1978-79**

Sex	Relatively serious offences (b)	Other offences (b)	Complaints under Child Welfare Act (b)	Total
Boys .....	634	651	10	1 295
Girls .....	154	124	42	320
Total .....	788	775	52	1 615

(a) See paragraph before table for definition of 'individual'.

(b) See previous table for classification of offences and complaints.

### Bankruptcy

The *Bankruptcy Amendment Act* 1980 substantially amended the Act of 1966. Some of the amendments commenced operation on the date of Royal Assent (8 April 1980), but there are substantial amendments yet to commence operation. Amongst these are provisions for: (i) reducing the period of bankruptcy from five to three years; (ii) protecting the position of creditors for maintenance; (iii) reducing the preferential position of the Commonwealth as a creditor; (iv) restricting the right of a creditor to object to the automatic discharge of a bankrupt; and many others.

Under the *Bankruptcy Act* 1966, a person unable to meet his debts may voluntarily present to the Registrar in Bankruptcy a petition against himself and become a bankrupt under section 55; if the Registrar does not accept the petition and refers it to the Court, he

may be directed to accept it. A creditor may petition the Court for the sequestration of a debtor's estate where the debt is not less than \$1 000. Where a debtor becomes bankrupt:

- (i) his property, not being after-acquired property, vests immediately in the Official Receiver in Bankruptcy; and
- (ii) his after-acquired property vests in the Official Receiver in Bankruptcy, or if a private trustee has subsequently been appointed, then in that trustee.

A debtor may avoid sequestration in some circumstances, by authorising a registered trustee to call a meeting of his creditors and take control of his property; or by authorising a solicitor to call a meeting of his creditors (Part X). The debtor's property is controlled by the trustee until the creditors resolve otherwise, or the Court orders otherwise, or a deed of assignment or arrangement is executed, or a composition is accepted, or the debtor dies or becomes bankrupt.

A person becoming bankrupt under the Act may be automatically discharged from bankruptcy after the expiration of five years (section 149) unless discharged earlier by the Court. The Registrar, trustee or a creditor may lodge an objection to this type of discharge, and if it is not withdrawn the debtor must apply to the Court under section 150 if he desires to be discharged.

The following table shows the number of bankruptcies and private arrangements together with the assets and liabilities of debtors:

**Bankruptcy Proceedings, Tasmania**

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Bankruptcies and orders for administration of deceased debtors' estates—						
Number .....	75	94	97	148	223	267
Liabilities .....	\$'000 636	1 158	931	1 607	2 222	3 756
Assets .....	\$'000 280	451	361	541	727	2 248
Deeds of assignment, arrangement, compositions and schemes—						
Number .....	6	4	5	8	13	22
Liabilities .....	\$'000 129	171	586	386	1 048	2 202
Assets .....	\$'000 176	132	336	304	594	800
Total—						
Number .....	81	98	102	156	236	289
Liabilities .....	\$'000 765	1 329	1 517	1 993	3 270	5 958
Assets .....	\$'000 456	583	697	845	1 321	3 048

### The Licensing Board

The Licensing Board of Tasmania was set up under the *Licensing Act* 1976 and consists of a Barrister (who is the Chairman) and two other members. The Board is empowered to hear and determine applications for 'general', 'on', 'off', 'club' and 'limited' licences. The Board may prescribe standard conditions as the basis on which licences are granted, with respect to different types of establishment.

The following table shows the total hotel bedroom accommodation available to the public during recent years:

**Hotels, Tasmania: Standard of Accommodation**

At 30 June	Total number of bedrooms	Number of bedrooms furnished with—	
		Private bath, shower, toilet and hand-basin	Handbasin with hot and cold running water
1974.....	4 089	1 899	1 812
1975.....	3 836	1 899	1 450
1976.....	3 962	2 082	1 606
1977.....	3 950	2 150	1 530
1978.....	3 700	2 238	1 215
1979.....	3 701	2 275	1 275

The Board's inspectors and public health inspectors carry out a thorough inspection of each hotel prior to the renewal of licences by the Commissioner. Reports are furnished for the information of the Board and the Tourist Department. An officer of the Tasmanian Fire Service also carries out an annual inspection to ensure that each hotel complies with their requirements.

The following table shows the number of operative licences for hotels, restaurants, liquor wholesalers and clubs for recent years:

Licensed Hotels, Restaurants, Clubs and Wholesalers, Tasmania

At 30 June	Hotels (a)	Restaurants (b)	Clubs	Wholesale licences	Total
1974 .....	274	42	164	45	525
1975 .....	273	52	167	45	537
1976 .....	271	60	169	48	548
1977 .....	274	64	180	52	570
1978 .....	275	68	184	53	580
1979 .....	282	71	190	48	591

(a) Includes a small number of premises not providing accommodation and known as 'taverns'.

(b) Includes motels which have a licence for restaurants only.

The Ogilvie ministry introduced 10 a.m. to 10 p.m. bar trading hours before World War II and, in the post-war period, Tasmania's 10 p.m. closing contrasted with 6 p.m. closing in S.A., Victoria and N.S.W. However, these States progressively liberalised their drinking laws, and by 1967 all had adopted late closing.

In 1967 the Tasmanian *Licensing Act* 1932 was amended to allow 11.30 p.m. closing on Friday and Saturday nights for those hotels which desired to observe these hours and which obtained the necessary permits; 10 p.m. closing was made the rule for other nights (excluding Sunday) with provision nevertheless to obtain extension permits for special functions. The permitted age for drinking on licenced premises was lowered from 21 to 20 years and lowered further to 18 years in 1973. Restaurants complying with defined conditions could obtain licences to sell liquor and licensed restaurants can open until 11.30 p.m. six nights a week. Dining accommodation, kitchen specifications, etc., for licensed restaurants are strictly supervised.

The Wrest Point Casino Licence (granted by the Treasurer) permits certain categories of gaming until 3 a.m., seven days per week. The *Licensing Act* 1976 makes provision for the issue of a casino permit authorising liquor to be sold or supplied for consumption within the Casino. This permit applies only in respect of times when the Casino is open for gaming during the prescribed hours. Other permits are: (i) *occasional permits* for genuine clubs and associations which wish to hold functions; and (ii) *public event permits* which authorise the sale of liquor at public entertainment (e.g. football matches).

The *Licensing (Trading Hours) Act* 1975 amended the *Licensing Act* 1932 and allowed all hotels, restaurants and licensed clubs to set their own trading hours. However hotels must be open for trade at least eight hours a day on five days of the week with Sunday trade limited to between noon and 8 p.m. The legislation, which adopted most of the Savas Committee of Inquiry recommendations on liquor licensing, came into operation at the same time as revised drink-driving laws. Sunday trading under the new law commenced on 21 December 1975.

## PRISONS

### General

The establishment, regulation and conduct of prisons and the custody of prisoners in Tasmania are provided for under the *Prison Act* 1977 which repealed the *Prison Acts* 1868 and 1908. Provision is made for the appointment, by the Governor, of a Controller of Prisons who is responsible for the supervision of prisons, including the initiation and implementation of correctional programs for prisoners and staff training schemes.

Each year, two appointments are made to the position of Official Visitor to each institution. They visit the prison at least once per month to examine the treatment, behaviour and condition of prisoners, and the condition of the prison.

The main prison in Tasmania is at Risdon near Hobart, which has as an outstation, the Prison Farm at Hayes in the Derwent Valley. The Launceston Prison functioned as a holding centre for prisoners from the northern districts of the State prior to their transfer to Risdon. During 1977-78 that prison was abandoned and the prisoners were transferred to the new Police Headquarters building. Since then the Police Department have taken over the financial responsibility for the operation and control of remandees in Launceston.

The following table shows Prisons Department expenditure from Consolidated Revenue:

**Prisons Department: Expenditure From Consolidated Revenue, Tasmania**  
(S'000)

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79
Total expenditure .....	2 089	2 326	2 753	3 184	3 510
Net receipts (a) .....	70	85	73	86	98
Net expenditure .....	2 019	2 240	2 680	3 098	3 413

(a) From prison industry and gaol farm activities described later in the text.

### *Capital Punishment*

The death sentence has not been carried out in Tasmania since 1946, but judges pronounced the sentence from time to time until 1968; in October 1968, the Attorney-General introduced a bill to abolish capital punishment and this was passed by the Parliament in December of that year.

### *Prisoners Received and Discharged*

In 1978-79, 900 male and 21 female prisoners were received into H.M. Prison, Risdon. In that period 869 male and 20 female prisoners were discharged. At 30 June 1979 there were 302 male and 3 female prisoners in custody. There is no distinction made between those on remand and those convicted and sentenced to imprisonment in these figures. Also, figures include those held in custody at the Hayes Prison Farm.

### *Prisoners' Offences*

The following table shows the offences for which convicted prisoners were received:

**Offences (a) for Which Convicted Prisoners Were Received in Tasmania, 1978-79**

Offence for which convicted	Males	Females	Persons	
			Number	Proportion of total
Offences against the person—				
Common assault .....	39	—	39	1.05
Assault police .....	29	—	29	0.78
Indecent assault .....	18	—	18	0.48
Other .....	36	3	39	1.05
Total .....	122	3	125	3.37
Offences against property—				
Stealing .....	1 417	5	1 422	38.30
Burglary and breaking offences .....	562	2	564	15.19
Steal a motor vehicle .....	165	—	165	4.44
Damage to property .....	46	—	46	1.24
Obtain goods by false pretences .....	121	33	154	4.15
Forgery, uttering and currency offences .....	55	22	77	2.07
Other .....	177	7	184	4.96
Total .....	2 543	69	2 612	70.35



## Offences (a) for Which Convicted Prisoners Were Received in Tasmania, 1978-79—continued

Offence for which convicted	Males	Females	Persons	
			Number	Proportion of total
Offences against good order—				
Drunkenness .....	68	1	69	1.86
Escape from lawful custody .....	4	—	4	0.11
Resist arrest .....	10	—	10	0.27
Indecent or threatening language .....	13	—	13	0.35
Fail to pay fines and costs or default .....	74	—	74	1.99
Other .....	325	2	327	8.81
Total .....	494	3	497	13.39
Traffic offences—				
Drive whilst licence suspended .....	218	2	220	5.93
Dangerous driving .....	8	—	8	0.22
Exceed .08 per cent .....	130	—	130	3.50
Drunken driving .....	21	—	21	0.57
Other .....	30	—	30	0.81
Total .....	407	2	409	11.02
Offences against the Dangerous Drugs Act .....	70	—	70	1.89
Grand Total .....	3 636	77	3 713	100.00

(a) The number of offences exceeds the number of prisoners received since some prisoners were convicted of multiple offences.

The next table classifies convicted prisoners according to the number of their previous convictions:

## Convicted Prisoners Received in Tasmania, 1978-79, According to Number of Previous Convictions (a)

Prisoners	Number of previous convictions				Total
	Nil	One	Two	Three or more	
Number received .....	160	86	47	331	624
Percentage of total .....	25.6	13.8	7.5	53.0	100.0

(a) Previous convictions may not necessarily have involved imprisonment.

## Age of Prisoners

Young offenders account for a high proportion of receptions. The proportion of convicted male prisoners under 25 years was: 61 per cent in 1974-75; 58 per cent in 1975-76; 59 per cent in 1976-77; 60 per cent in 1977-78; and 63 per cent in 1978-79. The following table shows the age of convicted prisoners admitted to prison:

## Ages of Convicted Prisoners Received in Tasmania, 1978-79

Sex	Age group (in years)								Total
	16-17	18-19	20-24	25-29	30-39	40-49	50-59	60 and over	
Males .....	64	113	207	91	75	37	20	4	611
Females .....	1	3	2	1	4	1	1	—	13
Total .....	65	116	209	92	79	38	21	4	624

*Parole and Remission of Sentences*

Good conduct remissions of up to one third of the sentence for prisoners sentenced to over three months may be granted by the Controller of Prisons.

On 31 March 1976, the *Parole Act 1975* was brought into effect by proclamation. This Act repealed the *Indeterminate Sentences Act* and provided machinery for the appointment of a three-member board to deal with the granting of parole to prisoners who had served six months or one third of their sentence, whichever was the greater. It also provided for the Board to make recommendations in relation to the release of prisoners who were serving life sentences or who were dangerous criminals.

*Risdon Prison*

The Risdon Prison, with provision for 333 prisoners, was opened in November 1960. Male prisoners were then transferred from the old Hobart Gaol and, in June 1963, the Female Prison, the first entirely separate prison for women to be built in the State, was opened on the Risdon site. The following table shows the daily average and highest number of prisoners at Risdon Prison over a six-year period:

Number of Prisoners, Risdon Prison (a)

Prisoners	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Maximum number .....	388	366	365	301	269	343
Daily average .....	344	342	309	263	241	306

(a) Includes Hayes Prison Farm.

The Risdon Prison incorporates workshops which serve as a basis for vocational and trade training in such subjects as woodworking, tailoring, sheet metal working, laundry and breadmaking. Educational services include: instruction during working hours for illiterate and semi-literate prisoners; private study during evenings in general academic subjects to Secondary Schools Certificate standard; correspondence courses in University, School Certificate, Higher School Certificate and various technical and commercial subjects; tuition in English for migrants; and training in art and allied subjects. A classification committee interviews all prisoners on admission and decides on each individual's training program.

Groups meet regularly for wood carving, art, pottery, toy making and chess. Feature and documentary films are screened fortnightly. The Prison Debating Society debates regularly against outside teams. The Education Section publishes a prison magazine periodically. A comprehensive sports program is conducted including athletics, gymnastics and competitions in cricket, volley ball, basketball and football.

The State Library of Tasmania helps with the prison library, providing a generous supply of books on a rotational basis, to supplement the stock of books owned by the Department. Over 5 000 volumes are immediately available for selection and prisoners may order books of special interest from the State Library System. The prison library has recently been re-located to develop the library atmosphere. Some 1 100 books are borrowed weekly from the library, all records being kept by prisoner librarians who receive advice from State Library officers.

A new security hospital was completed in 1978 to cater for both the physically ill prisoners and those suffering psychiatric disorders. The unit will accommodate up to 28 bed patients. Daily medical parades are conducted in the hospital for prisoners requiring out-patient type treatment. The building has a fully equipped dental surgery, treatment rooms, physiotherapy and occupational therapy rooms as well as a dispensary and accommodation for medical and para-medical staff.

Prison industries produce articles for government departments and institutions. The following table shows the receipts for prison industries over a five-year period. A laundry installed in 1963 contributes to receipts from sales and services but the amounts are not a true indication of value to the Government, as laundry and other services are provided at a nominal figure for hospitals and other government institutions.

**Prison Suspense Account (Prison Industries), Tasmania**  
(£)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Receipts (a) .....	145 045	184 672	192 132	216 978	247 946	285 473
Paid to Consolidated Revenue .....	40 850	35 329	27 834	23 076	30 632	63 658

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

**Hayes Prison Farm**

The Prison Farm at Hayes ('Kilderry') is an outstation of the Risdon Prison. It is used to prepare men for a normal way of life through operation of the honour system. Up to 70 prisoners who are regarded as being worthy of trust, regardless of their age, length of sentence or type of offence, are held there.

The following table shows the receipts from sale of farm produce and the amounts paid to Consolidated Revenue over a six-year period:

**Prison Farm Suspense Account, Tasmania**  
(£)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Receipts (a) .....	170 302	174 506	197 173	212 508	224 859	255 277
Paid to Consolidated Revenue .....	42 671	34 504	57 623	50 027	55 042	33 865

(a) Maintenance and material charges are met from receipts, the balance being paid to Consolidated Revenue in the following year.

The 567-hectare property has been developed into a model farm with a great diversity of farming activities. These include: approximately 26 hectares for vegetables; a registered stud of friesian cattle and herefords; about 2 000 sheep for wool and fat lambs; a registered herd of berkshire pigs; poultry; cropping of wheat, oats, lucerne and hay; breeding of children's ponies; and hot house cultivation. In May 1969, 125 hectares of land was purchased near New Norfolk. This property, about two kilometres north of the Hayes prison farm, functions as an annexe to the Hayes property. During 1970-71 a sawmill was established on the property but this was subsequently destroyed by vandals and was not rebuilt. A further 100 hectares adjacent to this property was purchased during 1974-75. The Royal Derwent Hospital farm of 297 hectares, including the dairy herd and poultry section, was transferred to the Prisons Department during 1971. Whole milk is produced and sold in bulk for general use. Building construction activities and machinery maintenance workshops also provide employment, but this range of prison industries is more limited than at Risdon. Similar educational and recreational facilities to those at Risdon are provided.

**The Probation and Parole Service**

The service was established in 1946 and is a division of the Attorney-General's Department. The service is headed by the Chief Probation and Parole Officer, and of the total complement of 59 officers, 42 are probation and parole officers and 17 are clerical and support staff. The head office of the Service is located in Hobart, and there are district offices at Launceston and Burnie and branch offices at Bellerive, Devonport, George Town, Glenorchy and Queenstown. In addition, there are individual probation and parole officers stationed at New Norfolk, Huonville, Ulverstone and Railton, on a part-time basis.

The main functions of the Service are to provide supervision of persons released from the courts on probation or discharged from prison on probation or parole. Counselling in respect of personal and family matters is offered, as is practical assistance in providing suitable employment wherever possible, and accommodation.

The service undertakes investigations and compiles pre-sentence reports on offenders for the courts and pre-release reports for the Parole Board. In addition, it administers the Work Order Scheme, which was developed and introduced into the Tasmanian criminal justice system in 1972 and which has numerous benefits for both the offender and the community.

**THE TASMANIA POLICE***Organisation*

The Police Department is headed by the Commissioner of Police who is responsible to the Minister for Police. The Commissioner is assisted by a Deputy Commissioner and two Assistant Commissioners. The highest uniform rank in the Force is that of Chief Superintendent.

The State is divided into three geographical districts with headquarters at Hobart, Launceston and Burnie. The Force also has four specialist branches: Recruitment and Training; Criminal Investigation; Traffic; and Management Services. Each district and branch is under the control of a Superintendent.

*General Policing*

General policing is performed by uniform personnel who maintain beat patrols on foot and in conjunction with vehicular patrols. Beat police are equipped with radios and are in constant touch with their bases.

*Recruitment and Training*

Two induction schemes operate (one for adults and another for Cadets): (i) adult courses are of 20 weeks duration for persons who have attained the age of 19 years; and (ii) Cadet courses are run for youths aged from 16 to 18 years and are of two years duration. Regular in-service courses are conducted for personnel drawn from all ranks and all parts of the State. The Rokeby Academy has administrative, classroom and residential blocks, together with a pistol range, parade ground, library, lecture-theatre, gymnasium and driver training complex. Single-room accommodation is available for 120 students. Classrooms are equipped with audio-visual educational devices, including closed-circuit television.

*Criminal Investigation*

While all personnel in the Force have a responsibility towards crime detection the Criminal Investigation Branch personnel specialise in this field—members are divided into specialised sections, including the Drug Bureau and Gaming Squad.

*Traffic Control*

The Traffic Control Branch is responsible for enforcing regulations for the Transport Commission and deploys personnel in cars and on motor cycles. It makes use of sophisticated mechanical and electronic devices.

*Management Services*

All support services, including the Information Bureau, Scientific Bureau, Planning and Research, Search and Rescue, Transport and Communications Sections, are part of the Management Services Branch.

The Information Bureau maintains a record of previous convictions, property tracing, *modus operandi* of crimes, missing persons and warrants issued as well as statistics on crimes and offences reported and cleared.

The Scientific Bureau provides specialist services in the fields of: (i) Fingerprinting. It has on file approximately 100 000 fingerprint sets. Close liaison is maintained with interstate and overseas sources as well as with the Central Fingerprint Bureau in Sydney. (ii) Photography. Duties involve attendance at the scene of major crimes and serious road accidents. Photogrammetric plans are produced. (iii) Ballistic examinations are provided, together with the maintenance of a ballistics library. (iv) Documents and drawing. Activities include examination of forged documents and use of 'Photo-fit' equipment to aid in the identification of offenders.

The Planning and Research Section is responsible for studying and improving existing work procedures and making recommendations on planning for future development.

A well equipped Search and Rescue Squad is based at Hobart and is augmented by part-time members from other sections of the Force. Duties include rescues from the bush, mountains, cliffs, caves, at sea and underwater. Valuable support is received from walking, climbing and boating organisations. A powerful motor launch, *Vigilant*, with a sea range of 1 300 kilometres is located at Hobart. Smaller craft are stationed at points around the State coastline and at inland waterways.





New Emu Bay Railway bridge over the Pieman River

*[R. A. Johnston]*





Snow crystals on dolerite boulders near the pinnacle of Mt Wellington

*[Edward Gall]*

Douglas Creek, Cradle Mountain—Lake St Clair National Park





The mobility of the Force is provided by a fleet of 400 vehicles, including motor cycles, caravans and mobile headquarters.

Radio and telex systems operate both intrastate and interstate. Radio is installed in most cars, boats and motor cycles giving a statewide coverage.

#### *Division of Road Safety*

The Division is headed by the Director of Road Safety. It is principally concerned with the development and implementation of Government road safety policy and legislation. It complements facilities available through other departments, authorities, private enterprise and voluntary organisations to ensure that available resources are fully used and co-ordinated.

A school road safety education program is operated throughout the State. Nine mobile Road Safety Officers are employed and supervise 60 part-time Adult Crossing Guards. In addition to school education, the Division is responsible for the preparation and dissemination of general road safety publicity material. Statistics concerning road crashes are used in assessing the value of instituted policies and in the development and initiation of new schemes to promote road safety throughout Tasmania.

#### *Strength of Force*

The following table shows the number of police and expenditure:

**Tasmania Police: Number and Cost**

Particulars	1975-76	1976-77	1977-78	1978-79	1979-80
Police officers (a) . . . . . no.	1 004	1 026	1 030	1 043	1 041
Persons per police officer(a) . . . . . no.	406	400	402	400	406
Cost (total expenditure of Police Department) ..... \$'000	16 053	19 025	20 979	23 346	n.y.a.
Cost per head of mean population . . . . . \$	39.52	46.50	50.91	55.89	n.y.a.

(a) At 30 June.

## **EMERGENCY SERVICES**

### **State Emergency Service**

Following a series of discussions at federal and state levels the Tasmanian Government, in 1962, decided, in common with other states, to establish a Civil Defence and Emergency Services Organisation for Tasmania. The Government considered that in addition to its intended role in time of war the organisation should be organised and trained to assist in combating natural emergency situations. A Director of Civil Defence and Emergency Services was appointed to plan the new organisation and exercise overall control of volunteer units. In April 1975 the title was changed to State Emergency Service in common with other states. Ministerial responsibility for the State Emergency Services is vested in the Minister for Police and Emergency Services.

#### *Legislation*

On 1 July 1976, the *Emergency Services Act* came into force. This legislation formally established the State Emergency Service, and set up a counter disaster control structure for dealing with any major emergency or disaster that might affect the State. Under this legislation the State Emergency Service was given wider functions and responsibilities, and the responsibilities of municipalities and other bodies were also set out. Under the Act, when a State of disaster is declared, command is vested in a State Disaster Executive, consisting of the Commissioner of Police, the Director of Emergency Services, and the Ministerial Liaison Officer (Emergency Services).

#### *Functions*

The State Emergency Service has the responsibility for ensuring that the community is adequately prepared to meet any disaster situation that may arise. To this end the Service has the roles of co-ordinating emergency planning, provision and co-ordination of emergency

training, and co-ordinating all supporting and ancillary emergency organisations in support of police and other authorities in time of emergency or disaster. The Service is responsible for the oversight and production of Counter Disaster Plans at municipal, regional and state level. To advise the Service in this function, specialist planning committees, incorporating senior representatives from government departments and instrumentalities, volunteer organisations and emergency services have been formed in the fields of transport, communications, medical care, welfare and public information. To ensure adequate communications during periods of disaster, the Service has developed a system of fail-safe communications covering the bulk of Tasmania and with links to the mainland. The communications system provides great flexibility and reliability, and is available for use by all emergency services.

In time of enemy action or hostilities against the State, the State Emergency Service is the co-ordinating authority of all civil defence measures as defined by the Commonwealth and State Governments.

#### *Administrative Structure*

State Emergency Service administration in Tasmania is organised on a three-level basis; municipal, regional and State. The State is divided into three regions, centred on Hobart, Launceston and Burnie. Each region is administered by a full-time regional officer assisted by a staff officer, and operations within regions are co-ordinated from regional headquarters. State headquarters (Hobart) is also responsible for maintaining and operating the State Emergency Operations Centre. The centre is manned at all times by a duty operator and put into action in event of any major emergency. At other times the operations centre provides the all hours contact point for the State Emergency Service and monitoring and base facilities for a number of other government departments' and authorities' radio nets out of normal office hours.

#### *Training*

Training is undertaken at State and regional Headquarters and at Municipal level. The State Emergency Service is responsible for the nomination of Tasmanian representatives attending courses and seminars at the Australian Counter Disaster College, Mount Macedon, Victoria. The Service also conducts a variety of counter disaster skills and procedure courses for other Tasmanian emergency services and for involved members of the public, private enterprise and various government departments.

#### *Equipment and Finance*

Certain items of protective clothing, operational and training equipment for use by the Service are provided annually by the Federal Government through the Natural Disasters Organisation. All other funding is by the State Government.

### **Fire Prevention and Fire Fighting**

#### *State Fire Commission*

Under the provisions of the *Fire Service Act 1979*, which was proclaimed on 1 November 1979, a new single Tasmania Fire Service was created. The State Fire Authority, the Rural Fires Board, and all Urban Fire Brigade Boards which had previously administered the several fire services, were abolished and their functions were assumed by a new State Fire Commission.

The Commission consists of the Commissioner, the Director of Urban Brigades, the Director of Country Brigades, two representatives of local government and a representative of the Treasurer.

The State is divided into three Regions (Southern, Northern, and North Western) each under the control of Regional Chief Officers for both Urban and Country Brigades, each having regional administrative support. The operational branches of the Service comprise 35 urban brigades and some 300 country fire brigades, Hobart and Launceston are almost totally manned by permanent officers and firefighters while Burnie and Devonport are manned by a combination of permanent officers and firefighters, and volunteer firefighters. All other urban fire brigades are manned by partly paid volunteers; all country fire brigades are manned by unpaid volunteers.



A central Training Division is responsible for the development and implementation of training of all brigades and for public education on fire prevention and protection matters. An Operations Division is responsible for the development of effective operational systems, facilities and procedures. The Fire Prevention Division is responsible for: inspection of premises; ensuring that general fire regulations are adhered to; development of programs of hazard reduction in urban and country areas; and public education on fire prevention matters.

A central Administration Division of the Fire Service has been developed by the amalgamation of the administrative sections of all previous branches and is responsible, through the Commissioner, to the State Fire Commission.

A Fire Service Advisory Council has been established under the *Fire Service Act 1979* to: advise the Minister for Police and Emergency Services on any matters affecting the administration of the Act referred to it by him; to advise the Commission on any matters relating to preventing and extinguishing fires referred to it by the Commission; and to advise the Commission on any matter that should, in the opinion of the Council, be brought to the attention of the Commission. The Council, under a Chairman appointed by the Governor, consists of 17 members representing: Tasmania Police, Forestry Commission, Municipal Association of Tasmania, Tasmanian Farmers' Federation, Tasmanian Farmers, Stock-owners, and Orchardists' Association, Royal Australian Institute of Architects, Tasmanian Timber Association, pulp and paper manufacturers and woodchip exporters, United Firefighters' Union, Urban Volunteer Firefighters Association, Country Fire Brigades Association, Commissioner of the State Fire Commission, Director of Urban Brigades and Director of Country Brigades.

From 1 July 1980 the cost of maintaining the Service will be borne by a 40 per cent contribution from Consolidated Revenue and a 60 per cent contribution raised by way of a levy on urban and rural landowners (based on assessed annual values, and collected on behalf of the Commission by local government councils).

#### Further References

##### *ABS Publications*

Public Justice, Tasmania (4501.6) (annual, 1978 issue released 28-9-79, 23 pp.)

Official Year Book of Australia (1301.0) (annual, 1980 issue released Nov. 1980, 730 pp.)

## Chapter 17

### LABOUR, PRICES AND WAGES

#### EMPLOYMENT

##### Labour Force and Employment

It is essential to distinguish between 'labour force' and 'employees' since *employment* statistics in this chapter relate mainly to wage and salary earners. These are, however, *only one component of the labour force* which also comprises employers, self-employed persons, unpaid helpers and unemployed persons.

##### Labour Force

Since the 1966 Census, a set of questions, based on activity in the week before the Census, has been asked to establish who should be included in the labour force. The composition of the labour force as determined by the 1966, 1971 and 1976 Censuses was as follows:

Elements of Labour Force, Tasmania: Censuses, 1966, 1971 and 1976

Year and sex	Employer	Self-employed	Employee	Unpaid helper	Un-employed	Total in labour force	Total population
1966—Males .....	8 245	9 162	87 572	432	1 146	106 557	187 390
Females .....	1 759	1 644	35 451	940	971	40 765	184 045
Persons .....	10 004	10 806	123 023	1 372	2 117	147 322	371 435
1971—Males .....	6 841	8 442	90 627	277	1 786	107 973	196 442
Females .....	1 727	1 892	39 649	760	1 261	45 289	193 971
Persons .....	8 568	10 334	130 276	1 037	3 047	153 262	390 413
1976—Males .....	15 390		92 447	441	4 003	112 281	201 512
Females .....	6 070		47 254	2 344	2 676	58 344	201 356
Persons .....	21 460		139 701	2 785	6 679	170 625	402 868

The new approach to labour force classification was as follows: in pre-1966 censuses people had been invited to classify themselves (e.g. as unemployed, employee, etc.) but in 1966, 1971 and 1976 people were invited to describe their *activity* in a specific week and the Statistician, using pre-determined definitions, classified them on the basis of their answers.

Briefly, the new questions asked whether the person: (i) had a job or business of any kind last week (even if temporarily absent from it); (ii) did any work at all last week for payment or profit (unpaid helpers who worked were to answer yes); (iii) was temporarily laid off by his employer without pay for the whole of last week; and (iv) looked for work last week (ways of 'looking for work' were specified on the Census form).

The 1966, 1971 and 1976 labour force included all persons answering *yes* to any one of these four questions. The effect of the new definition was to include additional persons in the labour force. This applied particularly to those working part-time (sometimes for only a few hours a week), some of whom in earlier censuses may not have considered themselves as '... engaged in an industry, business, profession, trade or service'.

The total of persons recorded as unemployed in 1966, 1971 and 1976 was compiled from persons answering *no* to questions (i), (ii) and (iii) and *yes* to question (iv).

### Labour Force Estimates (Intercensal)

#### The Population Survey

Population censuses tend to be expensive undertakings and are therefore held only at five-yearly intervals. However the demand for regular *census-type* information exists right through the intercensal periods; the most sought data are those describing the labour force. To meet this demand, the Bureau designed in 1960 a special sample of private households and non-private dwellings under the title 'population survey' and it trained teams of interviewers to contact the selected sample units by personal visit with the aim of filling in questionnaires on the spot.

The population survey can be used to collect an extremely wide range of data but the main routine application has been the labour force inquiry, conducted in February, May, August and November of each year up to February 1978 and monthly, thereafter. The questionnaire is filled in for persons 15 years and over within each sampled unit and the definitions of employment, unemployment, etc. are basically the same in concept as those used in population censuses. Naturally the estimates are subject to sampling error. The reliability of estimates based on sample surveys are measured by the 'standard error'. The specialist reader is referred to the Bureau's Canberra Office publication *The Labour Force* (Cat. No. 6203.0), where tables appear stating the standard errors associated with the estimates. The following table gives details of elements of the civilian labour force based on estimates derived from recent population surveys.

Civilian Population 15 Years of Age and Over, by Employment Status, Tasmania (a)

Month	Employed (b)			Unemployed (c)		Total labour force (d)		Not in labour force ('000)	Civilian population aged 15 and over ('000)
	Agri-culture ('000)	Other indus-tries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of popula-tion		
MALES									
1977—									
August .....	8.8	103.9	112.7	4.4	3.7	117.1	79.6	30.1	147.2
November ...	8.6	102.8	111.4	4.0	3.5	115.5	78.2	32.2	147.7
1978—									
February .....	9.3	102.2	111.5	7.4	6.2	118.9	80.1	29.6	148.5
May .....	8.8	100.6	109.3	6.5	5.6	115.9	77.9	32.9	148.8
August .....	9.5	101.7	111.2	6.3	5.3	117.5	78.7	31.8	149.3
November ...	8.3	103.1	111.4	6.0	5.1	117.4	78.5	32.2	149.6
1979—									
February .....	8.6	104.1	112.7	7.2	6.0	119.8	80.0	30.0	149.9
May .....	9.0	103.8	112.8	6.3	5.3	119.1	79.1	31.5	150.6
August .....	9.0	102.9	111.9	6.3	5.3	118.2	78.3	32.7	150.9
November ...	10.0	103.3	113.2	5.4	4.6	118.6	78.1	33.2	151.8
1980—									
February .....	8.8	104.8	113.6	7.2	5.9	120.8	79.1	31.9	152.7
May .....	7.9	104.0	111.9	6.3	5.3	118.2	77.2	35.0	153.2

Civilian Population 15 Years of Age and Over, by Employment Status, Tasmania (a)—continued

Month	Employed (b)			Unemployed (c)		Total labour force (d)		Not in labour force ('000)	Civilian population aged 15 and over ('000)
	Agri- culture ('000)	Other indus- tries ('000)	Total ('000)	Number ('000)	Per cent of labour force	Number ('000)	Per cent of popula- tion		
FEMALES									
1977—									
August . . . . .	3.1	52.9	56.0	5.5	8.9	61.5	41.2	87.7	149.2
November . . .	2.3	54.4	56.7	5.5	8.9	62.3	41.6	87.6	149.8
1978—									
February . . . .	3.0	51.2	54.2	6.0	9.9	60.2	39.9	90.5	150.7
May . . . . .	3.2	52.2	55.4	4.3	7.2	99.7	39.5	91.5	151.2
August . . . . .	2.3	52.4	54.7	4.7	7.9	59.4	39.1	92.4	151.8
November . . .	2.4	53.4	55.8	4.5	7.5	60.3	39.7	91.7	152.1
1979—									
February . . . .	3.4	52.7	56.1	5.3	8.7	61.4	40.2	91.4	152.7
May . . . . .	3.0	57.0	60.0	4.9	7.5	64.9	42.3	88.7	153.6
August . . . . .	2.3	59.0	61.3	6.2	9.2	67.5	43.9	86.5	154.0
November . . .	3.1	57.0	60.1	5.0	7.7	65.2	42.1	89.5	154.7
1980—									
February . . . .	2.9	57.2	60.1	6.4	9.6	66.5	42.8	89.0	155.5
May . . . . .	3.1	55.9	59.1	5.4	8.3	64.4	41.3	91.7	156.1
PERSONS									
1977—									
August . . . . .	11.9	156.8	168.7	9.9	5.5	178.6	60.3	117.8	296.4
November . . .	10.9	157.3	168.2	9.6	5.4	177.7	59.7	119.8	297.5
1978—									
February . . . .	12.3	153.4	165.7	13.4	7.5	179.1	59.8	120.1	299.2
May . . . . .	11.9	152.8	164.7	10.8	6.2	175.5	58.5	124.4	300.0
August . . . . .	11.8	154.1	165.9	10.9	6.2	176.8	58.7	124.3	301.1
November . . .	10.7	156.5	167.2	10.5	5.9	177.7	58.9	123.9	301.6
1979—									
February . . . .	12.0	156.8	168.7	12.5	6.9	181.2	59.9	121.4	302.6
May . . . . .	12.0	160.8	172.8	11.2	6.1	184.0	60.5	120.2	304.2
August . . . . .	11.3	161.9	173.2	12.5	6.8	185.8	60.9	119.1	304.9
November . . .	13.1	160.3	173.3	10.4	5.7	183.8	60.0	122.7	306.5
1980—									
February . . . .	11.7	162.1	173.8	13.6	7.2	187.3	60.8	120.9	308.2
May . . . . .	11.0	159.9	170.9	11.7	6.4	182.6	59.0	126.6	309.2

- (a) This series is based on a regular survey of a sample of the population. The estimates relate to all persons aged 15 years and over with the exception of members of the permanent armed forces and certain diplomatic staff.
- (b) Includes all those who, during the survey week: (i) worked for one hour or more for pay or profit; or (ii) worked 15 hours or more without pay in a family business (or farm); or (iii) were employees who had a job but were not at work and were on paid leave, leave without pay for less than four weeks up to the end of the survey week, stood down, on strike or locked out, on workers' compensation and expected to return to their jobs or receiving wages and salaries while undertaking full-time study; or (iv) were employers or self-employed persons who had a job, business or farm but were not at work.
- (c) Includes all those who, during the survey week, were not employed and who: (i) did not have a job and were actively seeking full-time or part-time work, or (ii) who were laid off without pay for the whole week.
- (d) Includes all those classified as employed or unemployed during the survey week.

### Definitional Differences

Later in this chapter is an unemployment series based on persons registered with the Commonwealth Employment Service. Since registration is a voluntary act, the unemployment figures appearing in the labour force series will differ from the registration series (in the former series 'actively looking for work' is the basis of the unemployment classification).

The next section of this chapter gives details of a monthly employment series which excludes: (i) employers; (ii) the self-employed; (iii) unpaid helpers; and (iv) employees in agriculture, private domestic service and defence forces. However, the labour force series (above) covers all these classes of persons with one exception, the defence forces.

### Wage and Salary Earners in Civilian Employment

The employment series in this section and the later section 'Industrial Classification of Employees' are based on data (referred to as *bench-marks*) derived from the Population Censuses of 1971 and 1976.

Estimates for the period subsequent to the 1971 Census have been derived from three main sources: (i) current pay-roll tax returns; (ii) current returns from government bodies; and (iii) some other direct records of current employment. The figures are supplemented by estimates of the change in employment in areas not covered by these direct collections.

The Australian Standard Industrial Classification is the industry classification now used throughout the series. The census industry dissection bench-marks have been adjusted, as far as possible, to an enterprise or establishment basis which is the basis for classification of subsequent estimates.

Prior to January 1976, all employers (other than certain exempt organisations) paying more than \$400 a week in wages were required to lodge pay-roll tax returns. The exemption level was raised to \$800 in January 1976, \$923 in January 1977 and \$1 154 in January 1978, but the changes have had little effect on employment estimates.

It should be noted that employees in rural industry and in private domestic service are not included in the estimates because of the inadequacy of current data. The terms *employment*, *number employed*, *employees* and *wage earners* used throughout are synonymous with, and relate to *wage and salary earners* on pay-rolls or in employment in the latter part of each month, as distinct from numbers of employees actually working on a specific date. The estimates include some persons working part-time.

Figures for recent periods are subject to revision. As they become available, particulars of employment obtained from other Bureau collections are used to check and, where necessary, to revise estimates.

The detailed study of employment trends requires examination of monthly figures; the next table has been compiled to show totals of employees for each month:

Wages and Salary Earners in Civilian Employment, (Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces),  
Monthly Estimates, Tasmania ('000)

Month	1978			1979			1980		
	Males	Females <sup>r</sup>	Persons <sup>r</sup>	Males	Females	Persons	Males	Females	Persons
January .....	89.7	47.5	137.1	89.4	r 47.8	r 137.2	89.5	48.2	137.7
February .....	90.0	47.6	137.6	89.9	r 48.0	r 137.9	89.6	48.4	138.1
March .....	89.6	47.8	137.4	89.9	r 48.4	r 138.3	89.8	48.9	138.7
April .....	89.4	47.7	137.1	90.0	r 48.2	r 138.2	89.7	49.0	138.8
May .....	89.4	47.6	137.0	89.8	r 48.2	r 137.9			
June .....	89.3	47.6	137.0	89.4	r 48.5	r 137.9			
July .....	89.1	47.5	136.6	88.9	48.3	137.2			
August .....	88.8	47.4	136.2	88.8	48.1	136.9			
September .....	88.8	47.2	136.0	88.3	48.3	136.6	n. y. a.	n. y. a.	n. y. a.
October .....	88.7	47.3	136.1	88.2	48.6	136.8			
November .....	88.8	47.2	136.0	88.7	48.6	137.2			
December .....	89.2	47.8	137.0	88.9	48.7	137.6			

The table below gives estimated totals for employees in Tasmania at June and December of each year:

**Wage and Salary Earners in Civilian Employment, (Excluding Employees  
in Agriculture and Private Domestic Service, and Defence Forces), Tasmania  
(<sup>'000</sup>)**

Year	June			December		
	Males	Females	Persons	Males	Females	Persons
1974.....	88.8	44.4	132.9	89.4	44.6	134.0
1975.....	89.6	r 45.9	r 135.6	89.1	r 45.6	r 134.7
1976.....	88.4	r 45.9	r 134.3	89.8	r 46.9	r 136.7
1977.....	89.7	r 46.9	r 136.6	89.5	r 47.5	r 137.0
1978.....	89.3	r 47.6	r 137.0	89.2	r 47.8	r 137.0
1979.....	89.4	r 48.5	r 137.9	88.9	48.7	137.6

**Civilian Employees of Government Bodies**

In Tasmania, as in other Australian states, a relatively high proportion of wage and salary earners is employed by government bodies operating at four levels: federal, state, local and semi-government (with the complication that semi-government authorities may have been created by either federal or state legislation). For the purpose of these statistics, government employees include persons working on government services such as railways, bus services, banks, post offices, power and light, air transport, education (including universities), radio, television, police, public works, government factories, departmental hospitals and institutions, etc., as well as those engaged in administrative services.

Estimates of private and government employment are on a revised basis which has been designed to achieve uniformity of classification with other statistical collections. The principal changes affecting the private/government dissection of employment estimates are as follows:

- (a) *Hospitals*: Non-departmental 'public' hospitals (other than those run by religious or charitable organisations) are now classified to State Government.
- (b) *Marketing Authorities*: All marketing authorities or boards (other than those which are purely growers' or producers' co-operatives) are now included in the government sector as they exercise functions which are fundamentally those of government.

The following table shows the number of government employees in Tasmania according to the level of government:

**Civilian Employees of Government Bodies, Tasmania, at 30 June  
(<sup>'000</sup>)**

Year and sex	Level of government			Total
	Federal (a)	State (a)	Local	
1977—Males .....	5.9	21.1	2.7	29.7
Females .....	2.1	14.9	0.4	17.4
Persons .....	r 7.9	36.0	3.2	47.0
1978—Males .....	7.6	19.8	2.7	30.0
Females .....	2.2	15.7	0.5	18.4
Persons .....	9.8	35.5	3.1	48.4
1979—Males .....	7.4	20.0	2.7	30.1
Females .....	2.3	15.9	0.5	18.7
Persons .....	9.7	35.9	3.2	48.8

(a) Includes semi-government authorities.

The next table shows employees according to private and government sectors:

**Total Civilian Employees of Private Employers and Government Authorities, Tasmania,  
at 30 June  
(<sup>'000</sup>)**

Year	Private employers			Government authorities		
	Males	Females r	Persons r	Males	Females	Persons
1977 .....	r 60.0	29.5	89.5	29.7	17.4	47.0
1978 .....	59.3	29.3	88.6	30.0	18.4	48.4
1979 .....	59.3	29.8	89.1	30.1	18.7	48.8

**Industrial Classification of Employees**

The next table specifies the main industrial groups and shows the industrial classification of *civilian employees only*, for recent years:

**Wage and Salary Earners in Civilian Employment, Tasmania at 30 June: Main Industry Groups  
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)  
(<sup>'000</sup>)**

A.S.I.C. Division	Year				
	1975	1976	1977	1978	1979
<b>MALES</b>					
A. (Part) Forestry, fishing and hunting ..	1.2	1.2	1.3	1.3	1.2
B. Mining .....	4.3	3.9	3.7	3.6	3.8
C. Manufacturing .....	23.3	23.6	23.9	23.2	22.8
D. Electricity, gas and water .....	3.3	3.3	3.3	3.3	3.3
E. Construction .....	11.8	11.3	11.2	11.0	11.3
F. Wholesale and retail trade .....	13.3	13.8	14.4	14.5	14.5
G. Transport and storage .....	7.3	6.5	6.4	6.4	6.2
H. Communication .....	2.8	2.7	2.7	2.7	2.7
I. Finance, insurance, real estate, etc. ...	4.5	4.6	4.8	4.9	5.2
J. Public administration and defence ...	5.0	5.1	5.2	5.3	5.3
K. Community services .....	8.9	9.0	9.3	9.7	10.0
L. Entertainment, recreation, etc. ....	4.0	3.3	3.4	3.3	3.2
Total .....	89.6	88.4	89.7	89.3	89.4
<b>FEMALES</b>					
A. (Part) Forestry, fishing and hunting ..	-	0.1	0.1	0.1	0.1
B. Mining .....	0.2	0.2	0.2	0.2	0.2
C. Manufacturing r .....	5.1	4.8	4.5	4.4	4.5
D. Electricity, gas and water .....	0.3	0.3	0.3	0.3	0.3
E. Construction .....	0.3	0.3	0.3	0.4	0.5
F. Wholesale and retail trade .....	9.5	9.3	9.6	9.6	9.9
G. Transport and storage .....	0.7	0.7	0.7	0.6	0.6
H. Communication .....	0.8	0.8	0.8	0.8	0.9
I. Finance, insurance, real estate, etc. ...	3.9	3.9	4.4	4.3	4.5
J. Public administration and defence ...	2.9	3.0	3.1	3.3	3.4
K. Community services .....	15.5	16.6	17.3	18.3	18.3
L. Entertainment, recreation, etc. ....	6.5	6.0	5.5	5.3	5.3
Total r. ....	45.9	45.9	46.9	47.6	48.5

**Wage and Salary Earners in Civilian Employment, Tasmania at 30 June: Main Industry Groups  
(Excluding Employees in Agriculture and Private Domestic Service, and Defence Forces)r—continued  
(‘000)**

A.S.I.C. Division	Year				
	1975	1976	1977	1978	1979
PERSONS					
A. (Part) Forestry, fishing and hunting ..	1.3	1.3	1.4	1.4	1.3
B. Mining .....	4.5	4.1	3.8	3.8	4.0
C. Manufacturing r .....	28.4	28.4	28.4	27.6	27.3
D. Electricity, gas and water .....	3.6	3.6	3.6	3.6	3.7
E. Construction .....	12.2	11.6	11.5	11.5	11.8
F. Wholesale and retail trade .....	22.9	23.1	24.1	24.2	24.4
G. Transport and storage .....	8.0	7.2	7.1	7.0	6.8
H. Communication .....	3.6	3.6	3.5	3.5	3.5
I. Finance, insurance, real estate, etc. ....	8.3	8.5	9.2	9.2	9.7
J. Public administration and defence .....	7.9	8.1	8.4	8.6	8.7
K. Community services .....	24.4	25.6	26.6	28.0	28.3
L. Entertainment, recreation, etc. ....	10.5	9.3	8.9	8.6	8.5
Total r. ....	135.6	134.3	136.6	137.0	137.9

## UNEMPLOYMENT

### Census Data

In the 1966 Population Census, the following question was asked: ‘Did the person look for work last week? Answer yes or no.’ (Note: ‘Looking for work’ means: (i) being registered with the Commonwealth Employment Service; or (ii) approaching prospective employers; or (iii) placing or answering advertisements; or (iv) writing letters of application; or (v) awaiting the results of recent applications.) In the 1971 and 1976 Censuses this question was asked again with one refinement: was the person seeking a job for the first time or had the person had other jobs before?

After the exclusion of persons who were already employed, but who were seeking alternative employment, the following data were obtained:

### Labour Force and Unemployed Persons, Tasmania, 1966, 1971 and 1976 Censuses

Year (30 June) and sex	Labour force	Unemployed	
		Number	Proportion of labour force (per cent)
1966—Males .....	106 557	1 146	1.1
Females .....	40 765	971	2.4
Persons .....	147 322	2 117	1.4
1971—Males .....	107 973	1 786	1.7
Females .....	45 289	1 261	2.8
Persons .....	153 262	3 047	2.0
1976—Males .....	112 281	4 003	3.6
Females .....	58 344	2 676	4.6
Persons .....	170 625	6 679	3.9



### Registrations with Commonwealth Employment Service

#### The Commonwealth Employment Service

The Commonwealth Employment Service (CES) was originally established by federal legislation under Section 47 of the *Re-Establishment and Employment Act 1945* and under the *Social Services Legislation Declaratory Act 1947*. In August 1978 a new *Commonwealth Employment Service Act* was passed providing for a National Director and State Directors of the CES and national, state and local committees, with an advisory role comprising a range of representatives from the community.

The functions of the CES are:

- (i) To assist persons seeking employment or a change in employment to obtain suitable positions having regard to their experience, training or qualifications, and to the economic and other needs of the Australian community. In particular to: (a) provide persons with information relating to employment, such as advice about qualifications for occupations and vocational guidance; and (b) make special arrangements and facilities to assist immigrants, Aborigines, the young, the handicapped, school leavers and those with professional or technical qualifications or those who have special requirements or disadvantages in relation to employment.
- (ii) To assist employers to fill vacant positions with available persons who are suitable for the performance of the duties and who meet employers' requirements for the positions.
- (iii) To promote and implement manpower programs and other measures designed to ensure a high level of employment.
- (iv) To register persons who are unemployed and who wish to claim unemployment benefits under the *Social Services Act 1947* and provide help in seeking employment for persons claiming or receiving such benefits.
- (v) To publish information about the labour market or services relating to employment.
- (vi) To collect statistics and other information relating to the labour market.

#### 'Registered for Employment'

In the following table the persons shown are those who claimed, when registering for full-time work (35 hours or more per week) with the CES, *that they were not employed* and who were recorded on the Friday nearest the last day of the month as unplaced. The count includes those referred to employers and those who may have obtained employment without notifying the CES; persons receiving unemployment benefit are included.

Persons Registered for Employment with Commonwealth Employment Service(a), Tasmania

Year	June				December			
	Males	Females	Persons		Males	Females	Persons	
			Number	Rate (b)			Number	Rate (b)
1974.....	1 968	1 342	3 310	2.0	4 089	3 251	7 340	4.3
1975.....	3 648	2 542	6 190	3.6	6 450	3 791	10 241	5.9
1976.....	5 840	3 146	8 986	5.1	6 464	3 734	10 198	5.8
1977.....	5 142	3 644	8 786	4.9	8 266	4 355	12 621	7.1
1978.....	8 261	3 683	11 944	6.8	9 325	5 248	14 573	8.0
1979.....	8 361	4 430	12 791	7.1	9 257	5 494	14 751	7.9
1980.....	8 448	4 896	13 344	7.3	n.y.a	n.y.a.	n.y.a.	n.y.a.

(a) Recorded as unplaced on the Friday nearest the last day of the month.

(b) Persons registered for employment as a percentage of the estimated total labour force. Labour force estimates used are the latest available up to the month in question (i.e. the relevant May or November estimates for years prior to 1978 in which year the population survey was changed from a quarterly to a monthly basis).

In interpreting the level of registration, account should be taken of the fact that registration is a *voluntary* act. Thus, while an increase in registrations may normally be taken to indicate an increase in unemployment, theoretically at least, it could merely indicate wider use of the facilities offered by the Commonwealth Employment Service. (There is an alternative source of data on unemployment which does not suffer from this disability; the section 'Labour Force Estimates (Intercensal)' earlier in this chapter includes a series showing the number of persons unemployed as one element of the labour force. 'Actively looking for work' is the basis of classification in the labour force series.)

The table that follows has been compiled to show the number registered for employment at the end of each month. The monthly figures are subject to pronounced seasonal influences, the most obvious being the effect of school-leavers on registrations in December and January.

**Persons Registered for Employment With Commonwealth Employment Service  
At End of Each Month (a)**

Month	1978			1979			1980		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
January .....	8 390	4 417	12 807	9 995	5 349	15 344	9 911	5 947	15 858
February .....	8 395	4 484	12 879	9 768	5 540	15 308	9 327	5 853	15 180
March .....	7 853	4 198	12 051	8 617	4 886	13 503	8 578	5 234	13 812
April .....	7 673	4 007	11 680	8 439	4 772	13 211	8 222	5 043	13 265
May .....	8 033	3 966	11 999	8 357	4 633	12 990	8 163	4 872	13 035
June .....	8 261	3 683	11 944	8 361	4 430	12 791	8 448	4 896	13 344
July .....	8 396	3 624	12 020	8 376	4 283	12 659	8 362	4 772	13 134
August .....	8 393	3 688	12 081	8 290	4 289	12 579	n. y. a.	n. y. a.	n. y. a.
September .....	8 679	3 816	12 495	8 639	4 227	12 866			
October .....	8 314	3 842	12 156	8 575	4 172	12 747			
November .....	8 473	4 165	12 638	8 248	4 394	12 642			
December .....	9 325	5 248	14 573	9 257	5 494	14 751			

(a) At Friday nearest last day of month.

#### **Differences between Population Surveys Estimates of Unemployment and Commonwealth Employment Service Figures**

The population (labour force) surveys sample estimates of unemployment will differ from the number of persons registered with the Commonwealth Employment Service as *not employed, awaiting placement in full-time employment* for a number of reasons, including the following:

- (i) the survey estimates include persons looking for part-time as well as full-time work;
- (ii) they include some unemployed persons (particularly females) who do not register with the Commonwealth Employment Service;
- (iii) they exclude persons who did any work at all during the survey week, even though they may subsequently have become unemployed and registered with the Commonwealth Employment Service, or have done so little work as not to lose eligibility for unemployment benefit;
- (iv) they exclude any persons registered as unemployed who find jobs but do not notify the Commonwealth Employment Service at once that they have done so;
- (v) they represent averages over a period whereas the numbers registered refer to a particular day near the end of the month; and
- (vi) they are subject to sampling variability.

#### **Persons Receiving Unemployment Benefit**

It is possible for a person to register as unemployed but make no claim for unemployment benefit. On the other hand, a person claiming unemployment benefit *is required* to register for

employment. The next table gives details of persons receiving unemployment benefit each month for recent years:

Number of Persons Receiving Unemployment Benefit, Tasmania (a)

Month	1975	1976	1977	1978	1979	1980
January .....	4 687	8 516	7 397	9 244	11 244	11 621
February .....	5 413	7 169	7 501	9 577	11 876	11 849
March .....	4 938	6 438	6 926	8 785	11 028	11 143
April .....	3 664	6 425	6 575	9 119	9 975	10 421
May .....	3 835	6 611	6 554	9 383	10 104	10 651
June .....	4 439	7 228	7 078	9 757	10 420	11 121
July .....	4 787	7 603	7 978	9 770	9 922	10 902
August .....	5 223	7 609	7 917	9 935	10 257	} n.y.a.
September .....	5 378	7 541	8 083	10 206	10 503	
October .....	5 369	7 210	8 037	9 812	10 203	
November .....	5 634	7 053	7 179	9 639	9 882	
December .....	8 096	7 009	7 610	9 508	10 180	

(a) Compiled from information furnished by the Department of Social Security. From March 1976 monthly figures are not directly comparable because of differences in accounting periods. Some monthly figures relate to the end of a four-week period and others to a six-week period. Prior to March 1976 the figures relate to the Saturday nearest the end of the month.

The number of males and females in receipt of unemployment benefit at the end of June is shown for recent years in the following table:

Persons Receiving Unemployment Benefit, Tasmania at June (a)

Particulars	1975	1976	1977	1978	1979	1980
Males .....	2 717	4 927	4 381	6 881	7 040	7 327
Females .....	1 722	2 301	2 697	2 876	3 380	3 794
Persons—						
Number .....	4 439	7 228	7 078	9 757	10 420	11 121
Proportion (b) .....	2.6	4.1	4.0	5.6	5.8	6.1

(a) See footnote to previous table.

(b) Persons receiving benefit as a percentage of the estimated total labour force. Rates for 1973 to 1977 are based on labour force estimates for May.

### Unemployment Rates

The next table brings together details relating to the civilian labour force, persons registered for employment with the Commonwealth Employment Service and persons receiving unemployment benefits. Estimated unemployed (from the population survey), registered unemployed and unemployment benefit recipients are shown as proportions of the total labour force. It is noted that, while the labour force includes part-time workers and those seeking part-time work, only those seeking full-time work (35 hours or more per week) are registered with the CES and registration is a voluntary act.

The Civilian Labour Force, Unemployment and Unemployment Rates, Tasmania for May each Year

Particulars	1975	1976	1977	1978	1979	1980
Civilian labour force (a)—						
Employed (b).....'000	163.7	167.7	168.7	164.7	172.8	170.9
Unemployed—						
Looking for full-time work (c).....'000	n.a.	n.a.	8.1	9.6	10.0	10.2
Looking for part-time work (d).....'000	n.a.	n.a.	2.1	(e)	(e)	1.5
Total unemployed.....'000	6.7	8.5	10.2	10.8	11.2	11.7
Total labour force.....'000	170.4	176.1	178.8	175.5	184.0	182.6

**The Civilian Labour Force, Unemployment and  
Unemployment Rates, Tasmania for May each Year—continued**

Particulars	1975	1976	1977	1978	1979	1980
Unemployment rate (f) .....%	4.0	4.8	5.7	6.2	6.1	6.4
Registered unemployed—						
Persons (g) ..... '000	5.9	8.7	8.1	12.0	13.0	13.0
Rate (h) .....%	3.5	4.9	4.5	6.8	7.1	7.1
Unemployment benefit recipients—						
Persons ..... '000	3.8	6.6	6.6	9.4	10.1	10.7
Rate (i) .....%	2.3	3.8	3.7	5.3	5.5	5.8

- (a) Aged 15 years and over; estimates derived from the population survey (see the earlier section 'Labour Force Estimates').
- (b) Includes: (i) full-time workers who usually work for 35 hours or more per week and others who did so during the survey week; and (ii) part-time workers who usually work for less than 35 hours per week and who worked for one hour but for less than 35 hours for pay, or who worked for 15 hours or more without pay, during the survey week.
- (c) Persons not classified as employed but who had actively looked for full-time work (35 hours or more per week) during the last month.
- (d) Persons not classified as employed but who had actively looked for part-time work during the last month.
- (e) Subject to sampling variability too high for most practical uses.
- (f) Total unemployed as a proportion of the total labour force.
- (g) Persons registered for employment (work of 35 hours or more per week) with the CES.
- (h) Registered unemployed (for full-time work) as a proportion of the total labour force.
- (i) Unemployment benefit recipients as a proportion of the total labour force.

### DEPARTMENT OF EMPLOYMENT AND YOUTH AFFAIRS

In addition to its function of operating the Commonwealth Employment Service, the Employment Division of the Department of Employment and Youth Affairs has controlled schemes aimed at reducing the recent high level of unemployment. A brief description of these schemes follows.

#### National Employment and Training System

In October 1974 the employment training schemes administered by the then Department of Labour and Immigration, together with the Training Scheme for Widow Pensioners, were superseded by the National Employment and Training System.

The National Employment and Training (N.E.A.T.) System provides a comprehensive system of labour market training designed to remedy labour imbalances by:

- (i) Alleviating unemployment where it occurs and overcoming skills in short supply.
- (ii) Assisting in the long-term restructuring of the work force by promoting regional development and bringing about overall increases in the general level of skills. Training arrangements are generally not restricted according to occupation and payment can be made either as a subsidy to employers or as allowances to trainees.

Facilities approved for training include those provided by public and private education institutions but of growing importance is the training provided by industry and commerce by arrangement with employers and with employer industry and trade associations. Trainees are approved primarily on the basis of labour market demand for their existing and proposed skills. Subject to a means test, trainees attending educational institutions receive training allowances. Employers who provide approved programs of in-industry training and meet the wage costs of trainees are paid a subsidy for the duration of approved training periods.

All applications for employment training through N.E.A.T. are made with the Commonwealth Employment Service which, in its capacity as an employment referral centre, is able to test the labour market and determine an individual's need for training as a means of obtaining satisfactory employment.

Special initiatives under the N.E.A.T. System have been enacted in recent years in an attempt to offset the high levels of youth unemployment. These include:

- (i) The special youth employment training program (S.Y.E.T.P.). This provides a subsidy for an extended training period to employers willing to provide employment and training to youths who have been unemployed for more than four months in the past year.
- (ii) The Special Assistance Program (S.A.P.) which provides subsidies to employers of apprentices threatened by work shortage, or allowances for full-time trade training for apprentices whose indentures have been suspended.
- (iii) The education program for unemployed youth (E.P.U.Y.). This is a program initiated by the Commonwealth Department of Education to increase the employment prospects of unemployed young people through use of State Education Department facilities. Trainees are paid a N.E.A.T. allowance while attending these courses.

### Community Youth Support Scheme

The Community Youth Support Scheme (C.Y.S.S.) is a Federal Government Scheme which was introduced in October 1976 as a means of encouraging local community groups to become involved in assisting unemployed young people. The scheme, which is the first of its kind, recognises that young people experiencing periods of unemployment at a time when there is a shortage of jobs may need support or assistance.

The form in which this support may be offered varies according to the particular needs of the young people concerned. Organisations and groups within the community are encouraged to seek funding to run programs and services for young unemployed people. The scheme is designed to complement other Government initiatives previously introduced to increase employment and training opportunities for young people. Accordingly, C.Y.S.S. programs must contain some orientation towards employment. This need only be in fairly general terms. It is not intended that C.Y.S.S. should provide formal skills training as this may be dealt with under N.E.A.T.

C.Y.S.S. is not a job creation program, nor is it a means of getting jobs done for organisations which need free labour. C.Y.S.S. may help young people in several ways:

- (i) By better equipping them to get a job. Sessions on how to handle job interviews, how to go about applying for a job and even where to look for jobs will give a young person confidence and a better chance of finding employment.
- (ii) By giving assistance with social, financial, educational, health and general welfare problems that could be making it more difficult for them to find employment.
- (iii) By providing a wide range of activities to make the period of unemployment more interesting and more creative. Because of the shortage of job vacancies some young people may face long periods of unemployment. They may become bored, frustrated and disillusioned. C.Y.S.S. funds may be used to provide outdoor activity, art and craft workshops, sessions on basic car maintenance, cookery, etc.

Any young person registered with the Commonwealth Employment Service is eligible to participate in C.Y.S.S. projects. Bus fares and other necessary expenses incurred in attending a C.Y.S.S. project are reimbursed up to a maximum of \$6 per week.

## INDUSTRIAL LEGISLATION AND CONDITIONS

### Apprenticeship

#### *Apprenticeship Commission*

The Apprenticeship Commission was set up under the *Apprentices Act 1942* to: (i) encourage, regulate and control training in proclaimed trades; (ii) assist youths towards successful trade courses; and (iii) provide properly trained craftsmen for industry. The

Commission, which meets each month, consists of three representatives of trade unions, three of employers' organisations, a nominee of the Minister for Education and the President, all members being appointed for a three-year term. To keep the Commission up-to-date with the latest developments, Trade Committees have been formed for particular industries, with both employers and employees represented.

Apprentices are trained at work and at technical classes, and supervisors report on the effectiveness of the training; supervisors also give on-the-spot advice to employers and apprentices where their mutual obligations are concerned and refer matters that cannot be settled in this way to the Commission for decision.

### Apprenticeships

An apprenticeship may not be commenced without the consent of the Commission which determines the suitability of employers for training apprentices and the educational qualifications required for entry to a particular trade.

The apprentice serves a probationary period before a contract (indentures) is made with the employer and registered with the Commission. The Commission determines disputes about the contracting parties' rights, duties and liabilities and no apprenticeship may be terminated, suspended or assigned other than by its authority; when an apprenticeship has been completed, the employer and the Commission certify to this effect. Where apprentices are required to undertake technical training, either at technical classes or by correspondence, instruction is mandatory. Apprentices attend technical classes for eight hours per week during working hours without loss of pay. (Country apprentices in remote areas attend three fortnightly training periods each year.) The progress apprentices make is reported to the Commission and unsatisfactory reports are investigated.

Apprentices are encouraged in the following ways: (i) by payment of *proficiency allowances* for annual examinations passed successfully in the allotted time; (ii) by *certificates of proficiency* for apprentices successfully completing the mandatory trade course of technical instruction; (iii) by reducing the apprenticeship term by one year in some cases, where the qualifying trade course is completed in the allotted time; and (iv) by the award of bursaries.

The Commission offers an award to the outstanding apprentice in each of the building, automotive, electrical, metal and other trades, and from these five apprentices, the 'Apprentice of the Year' is selected and qualifies for an award of \$600. Other awards are to the value of \$450. Should there not be any outstanding apprentice in any particular trade group, the prize allotted for that group may be awarded to another trade group.

### Number of Apprentices

The following table shows the number of apprentices in Tasmania and also details of apprenticeships registered and completed:

Number of Apprentices, Apprenticeships Registered and Completed, Tasmania

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Number at 30 June (a)—						
Indentured apprentices .....	4 265	4 285	4 450	4 424	4 445	4 465
Apprentices on probation .....	218	183	356	320	330	296
Total .....	4 483	4 468	4 806	4 744	4 775	4 761
During year—						
New apprenticeships registered ...	1 312	1 413	1 427	1 271	1 278	1 379
Apprenticeships completed .....	771	1 052	1 007	1 077	1 007	1 140

(a) Distributed in proclaimed trades.

**Industrial Safety and Accident Prevention****General**

**Responsibility:** The Department of Labour and Industry administers legislation relating to safety, health and welfare in work places generally (but excluding work places subject to the *Mines Inspection Act 1968* which prescribes safety standards for mines and mining works and is administered by the Mines Department). The Department's Technical Services Division inspectorate performs inspection and advisory functions throughout the State.

**Prevention:** Prevention obviously has a two-fold aspect: (i) inspection programs aimed at pin-pointing unsafe working conditions; and (ii) education and training designed to eliminate unsafe actions.

**Training:** The Department endeavours to develop an attitude of 'safety consciousness' among employees and employers. This is the primary aim of general safety training. More specific training is basically aimed at educating supervisors and foremen, since an attitude of 'safety consciousness' must involve management. Formal training in industrial safety and accident prevention is available at Hobart and Launceston Technical Colleges in two year courses. Informal training is arranged by the Department of Labour and Industry, the two-day courses being based on the concept of 'training within industry'. Single sessions on industrial, farm and forest safety are also available and the Department makes arrangements to provide instructors on request.

**Safety Officers:** It is expected that large undertakings will have their own specialists concerned with safety matters. However, government safety officers are available to industries which may use their services for short periods. Their function is purely advisory and they assist organisations which wish to stress safety or to reduce their accident rates.

**Factory Legislation**

Working conditions in factories in Tasmania are prescribed under the *Industrial Safety, Health and Welfare Act 1977*. All factories are required to register with the Department of Labour and Industry; fees date from 1 January each year. Fees for registration range from \$3 for small factories (where less than six persons are employed), up to \$345 for factories employing more than 800 persons. See the 1977 and earlier *Year Books* for greater detail relating to factory legislation and factory inspection.

**Inspection of Machinery**

Generally, the *Inspection of Machinery Act 1960*, as amended, applies to all machinery rated at a kilowatt or more used in manufacturing or industrial processes and specifically includes boilers, pressure vessels, lifts and cranes. By proclamation, machines not ordinarily covered by the Act may be made subject to its provisions. The Department of Labour and Industry is responsible for application of the Act which is administered by a chief inspector and district inspectors at Hobart, Launceston, Burnie and Devonport.

**Safety on Construction Sites**

Safety on construction work is covered by provisions of the *Industrial Safety, Health and Welfare Act 1977*.

**Industrial Safety, Health and Welfare Act**

The *Industrial Safety, Health and Welfare Act 1977* combines the major provisions of the *Factories, Shops and Offices Act 1965*, the *Scaffolding Act 1960* and the *Inspection of Machinery Act 1960* and otherwise provides wide regulation-making powers in respect of safety, health and welfare matters generally. The Act and regulations have application to all work places (other than those subject to the *Mines Inspection Act 1968*).

**Industrial Accidents**

Industrial accident statistics in Tasmania are compiled from returns of workers' compensation claims submitted by insurance companies, self-insurers and State Government departments. From 1977-78 the returns have been submitted by insurers to cover the number of accidents that occurred during a financial year. Previously, returns were collected for cases finalised during a financial year.

The collection is limited to those employees covered by the Tasmanian *Workers' Compensation Act* and therefore excludes self-employed persons, Federal Government employees and the police. Exclusion of self-employed persons is likely to reduce coverage in industries where self-employment is prevalent (e.g. retail trade, rural industries, etc.). Because of the exclusion of Federal Government employees, some industries are not covered at all, while coverage is considerably reduced in other industries (e.g. communications).

In compiling the statistics the following definitions have been adopted:

**Industrial Accident:** A compensated work injury causing death or absence of the injured person from work for one day or more. Disease cases and accidents occurring during journeys or recess periods are included.

**Time Lost:** The actual time lost from work of persons reported to be temporarily incapacitated or permanently partially-incapacitated as a result of a compensated work injury.

**Cost of Claims:** Includes compensation for wages lost, hospital and medical expenses and lump sum settlements of cases finalised during the year ended 30 June.

**Industry Groups:** Classified in accordance with the Australian Standard Industrial Classification.

The table that follows shows the number of industrial accidents reported during 1978-79 and the time lost through those accidents which caused temporary and permanent partial-disability.

**Fatal and Non-fatal Industrial Accidents: Industry Group and Time Lost, Tasmania, 1978-79**

Industry group	Accidents		Time Lost	
	Fatal	Non-fatal	Total	Average per accident
	No.	No.	Weeks	Weeks
Primary, mining, etc.—				
Primary production .....	—	354	818	2.3
Mining .....	—	435	670	1.5
Total .....	—	789	1 489	1.9
Manufacturing—				
Food, drink, etc. ....	—	500	929	1.9
Wood and wood products, etc. ....	1	271	364	1.3
Glass and clay products, etc. ....	—	64	94	1.5
Metal and metal products, etc. ....	1	827	1 570	1.9
Transport equipment .....	—	63	108	1.7
Other manufacturing .....	—	411	872	2.1
Total .....	2	2 136	3 937	1.8
Other industries—				
Electricity, gas, etc. ....	—	233	392	1.7
Construction .....	—	1 257	2 045	1.6
Wholesale and retail trade .....	—	716	1 308	1.8
Transport, storage, etc. ....	1	235	466	2.0
Finance and property .....	—	72	128	1.8
Public administration .....	—	167	299	1.8
Community services .....	—	328	763	2.3
Amusements, hotels, etc. ....	1	182	526	2.9
Total .....	2	3 190	5 926	1.9
Grand total .....	4	6 115	11 352	1.9

The cost of claims arising out of industrial accidents, as applicable to each industry group, is shown in the next table:



**Industrial Accidents: Industry Group and Cost of Claims, Tasmania, 1978-79**  
(£)

Industry group	Cost of Claims			
	Fatal accidents	Non-fatal accidents	Total accidents	Average per non-fatal accident
Primary, mining, etc.—				
Primary production .....	—	242 860	242 860	686
Mining .....	—	221 888	221 888	510
Total .....	—	464 748	464 748	589
Manufacturing—				
Food, drink, etc. ....	—	224 388	224 388	449
Wood and wood products, etc. ....	40 550	86 494	127 044	319
Glass and clay products, etc. ....	—	20 555	20 555	321
Metal and metal products, etc. ....	35 055	445 802	480 857	539
Transport equipment .....	—	24 768	24 768	393
Other manufacturing .....	—	242 515	242 515	590
Total .....	75 605	1 044 522	1 120 127	489
Other industries—				
Electricity, gas, etc. ....	—	108 685	108 685	466
Construction .....	—	593 020	593 020	472
Wholesale and retail trade .....	—	395 793	395 793	553
Transport, storage, etc. ....	1 450	119 538	120 988	509
Finance and property .....	—	35 490	35 490	493
Public administration .....	—	144 489	144 489	865
Community service .....	—	224 226	224 226	684
Amusements, hotels, etc. ....	37 254	140 105	177 359	770
Total .....	38 704	1 761 346	1 800 050	552
Grand total .....	114 309	3 270 616	3 384 925	535

### Workers' Compensation

**Legislation:** Workers' compensation legislation in Tasmania was first introduced in 1910 but it was not until 1927 that the principle of compulsory insurance was embodied in the *Workers' Compensation Act 1927*.

**Purpose and Limitations:** The principle of the Act is provision for compensation on the death or disablement of a worker, if occasioned by personal injury arising out of and during the course of employment. In 1970 the Act was amended to extend compensation cover for injuries sustained by a worker travelling in either direction between his residence and place of employment. The Act provides that this cover to and from work applies only for reasonably direct journeys, except for breaks or deviations connected with the worker's employment. Amendments in 1970 extended coverage to workers who are temporarily absent from work during meal breaks. Self-inflicted injuries are excluded and certain limitations are applied where serious or wilful misconduct is involved. Monetary benefits have fixed limits. All reasonable costs of medical, hospital, nursing and ambulance services and in the event of death, the reasonable costs of burial or cremation are paid. In addition, weekly payments are made during periods of incapacity and there is provision for a lump sum entitlement for specified injuries included in a schedule to the Act.

**Non-contributory Basis:** The Act is non-contributory, i.e. the worker does not pay into any fund for the provision of benefits. The employer is obliged to insure with an approved insurance company against the liability to compensation, except in certain cases where he is allowed to carry his own risk. In any case where an employer has no paid-up insurance policy, where the employer cannot be found or where the employer or his insurance company has become insolvent, the worker may claim against a 'nominal insurer', as if he were the employer. Amounts paid by the 'nominal insurer' are provided by all insurance companies carrying on workers' compensation business. Each company is required to contribute to these types of claims in proportion to the premium income derived from policies issued during the preceding year.

**Compensation on Death:** Where death results from an injury, the compensation payable to dependants wholly dependent on the worker's earnings is 284 times the current Hobart basic rate, plus seven times the current Hobart basic rate for each worker's child under sixteen years at the date of injury. Partial dependants are entitled to proportionate amounts.

**Basic Rate** means the minimum weekly wage payable to the lowest paid adult male employed at Hobart under the federal Metal Trades Award (in June 1980 the minimum was \$127.30 per week).

**Weekly Payments During Incapacity:** When the worker is *totally incapacitated* he is entitled to receive weekly compensation payments at whichever of the following alternatives is greater: (i) the rate of his average weekly earnings over the period of twelve months immediately preceding the period of incapacity; or (ii) the ordinary time rate of pay for the work on which he was engaged immediately prior to the period of incapacity. When the worker is *partially incapacitated* the weekly payments are reduced by any amount that he is able to earn in some other suitable employment.

**Maximum Limit of Weekly Payments:** In cases of partial or total incapacity of any worker, the total liability of an employer in making weekly compensation payments is limited to 284 times the current Hobart basic rate.

**Lump Sum Payments:** In addition to weekly incapacity payments, lump sum payments are made in respect of the loss of members of the body or of bodily powers of function. In the Act, specific injuries are listed and the single amount payable is related to the current Hobart basic rate (specified as B in the following examples): (i) loss of both feet,  $B \times 284$ ; (ii) loss of leg,  $B \times 138$ ; (iii) loss of thumb,  $B \times 51$ ; and (iv) loss of great toe,  $B \times 35$ , etc. Where more than one of these injuries are suffered in the same accident, a maximum payment equal to  $B \times 532$  may be paid.

### Long Service Leave for Casual Employees

The *Long Service Leave Act* 1976 provides for the granting of 13 weeks long service leave to all employees who complete 15 years continuous service with one employer. A pro-rata entitlement applies in respect of termination of employment after less than 15 years service in certain circumstances.

Contributions to a Long Service Leave (Casual Employment) Fund are made by employers with respect to all casual employees covered by the Act. For further details, reference should be made to the 1977 or earlier editions of the *Year Book*.

## TRADE UNIONS

The following table shows details of the number of unions and the number of union members in Tasmania:

Trade Unions: Numbers and Membership, Tasmania (a)

Year ended 31 December	Number of separate unions	Number of members ( <sup>'000</sup> )	Annual increase in membership (per cent) (b)	Year ended 31 December	Number of separate unions	Number of members ( <sup>'000</sup> )	Annual increase in membership (per cent) (b)
1968.....	115	68.4	0.4	1974.....	123	89.0	6.0
1969.....	116	70.5	3.1	1975.....	122	88.0	-1.1
1970.....	119	74.1	5.1	1976.....	120	87.6	-0.5
1971.....	115	75.9	2.4	1977.....	122	92.3	5.4
1972.....	112	81.0	6.7	1978.....	123	90.9	-1.5
1973.....	118	84.0	3.7	1979.....	120	90.0	-1.0

(a) Figures for the period 1968 to 1978 have been revised.

(b) Over preceding year.

## PRICES

### Retail Prices and Price Indexes

#### Retail Price Index Numbers from 1901

Retail prices of food and groceries and average rentals of houses for periods extending back to the year 1901 were collected by the Australian Statistician. A continuous price series

from 1901 to the present day (shown in part below) has been constructed from the various indexes in use during this period to provide a *broad indication* of long-term trends in retail price levels for Australia. The index numbers are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are 1901-1914, the 'A' Series; from 1914 to 1946-47, the 'C' Series; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and 'C' Series excluding rent; and from 1948-49, the Consumer Price Index.

**Retail Price Index Numbers from 1901: Six State Capital Cities Combined**  
(Base: Year 1911 = 100)

Year	Index number	Percent-age change (a)	Year	Index number	Percent-age change (a)	Year	Index number	Percent-age change (a)
1901.....	88		1946.....	190	+1.6	1973.....	720	+9.4
1911.....	100	+3.1	1951.....	313	+19.5	1974.....	829	+15.1
1921 (b).....	168	-13.0	1956.....	419	+6.3	1975 (c).....	954	+15.1
1926.....	168	+1.8	1961.....	471	+2.6	1976 (c).....	1 083	+13.5
1931.....	145	-10.5	1966.....	517	+3.0	1977.....	1 216	+12.3
1936.....	141	+2.2	1971.....	621	+6.0	1978 (c).....	1 312	+7.9
1941.....	167	+5.0	1972.....	658	+6.0	1979 (c).....	1 431	+9.1

(a) Over previous year (previous year's figures not necessarily shown in table).

(b) November; remaining figures are averages for the respective years.

(c) Affected by changes in the financing of health services.

### Consumer Price Index

The Consumer Price Index (CPI) measures quarterly changes in the price of a constant 'basket' of goods and services which account for a high proportion of expenditures by metropolitan wage and salary households. The CPI is described as a chain of 'fixed weight aggregative' linked indexes. Significant changes in the weighting pattern have been made at approximately five-yearly intervals to take account of changes in household spending patterns. However, during each period between links the range of items included and their quantity weights remain fixed (i.e. the 'quantity' for each type of item included in the 'basket' for calculation of the CPI does not change between linking dates)—base-weighted indexes of this type are referred to as Laspeyre's indexes. The percentage contributions of items to the CPI (often described as 'value weights') change continually from quarter to quarter because of relative price movements which tend to differ from one item to another. The next table shows the percentage contributions of the various groups and sub-groups to the CPI as at the September quarter 1976, when the (current) ninth linked series was introduced, and as at the June quarter 1980:

**Consumer Price Index, Six State Capital Cities Combined Percentage Contributions to the Total Index Aggregate (a)**

Group, Sub-group, etc.	As at September quarter 1976		As at June quarter 1980	
	Sub-group, etc.	Group	Sub-group, etc.	Group
Food—				
Dairy produce . . . . .	2.138	} 21.026	2.041	} 22.453
Cereal products . . . . .	2.384		2.215	
Meat and seafoods—Meat . . . . .	4.537		6.166	
Fish . . . . .	0.420		0.496	
Fruit and vegetables—Fresh fruit and vegetables . . . . .	2.017		2.048	
Processed fruit and vegetables . . . . .	0.889		0.771	
Soft drinks, icecream and confectionery . . . . .	2.080		2.118	
Meals out, take away food—Meals out . . . . .	2.072		} 4.474	
Snacks, take away food . . . . .	2.331			
Other food . . . . .	2.158			

**Consumer Price Index, Six State Capital Cities Combined Percentage Contributions to the Total Index  
Aggregate (a)—continued**

Group, Sub-group, etc.	As at September quarter 1976		As at June quarter 1980	
	Sub-group, etc.	Group	Sub-group, etc.	Group
Clothing—				
Men's and boys' clothing—Men's clothing . . . . .	2.339	10.141	2.735	9.789
Boys' clothing . . . . .	0.589			
Women's and girls' clothing—Women's clothing . . . . .	3.911		4.373	
Girls' clothing . . . . .	0.578			
Piecegoods and other clothing . . . . .	0.538		0.563	
Footwear—Men's footwear . . . . .	0.549			
Women's footwear . . . . .	0.774			
Children's footwear . . . . .	0.328	1.582		
Clothing and footwear services . . . . .	0.535		0.536	
Housing—				
Rent—Privately owned dwellings . . . . .	4.779	13.544	4.363	12.634
Government owned dwellings . . . . .	0.468		0.553	
Home ownership—Local government rates and charges . . . . .	1.759		1.813	
House price . . . . .	4.708		5.905	
Repairs and maintenance . . . . .	1.830			
Household equipment and operation—				
Fuel and light—Electricity . . . . .	1.437	14.761	2.339	13.660
Gas . . . . .	0.520			
Other fuel . . . . .	0.278			
Furniture and floor coverings . . . . .	3.222		2.899	
Appliances . . . . .	1.909		1.565	
Drapery . . . . .	1.077		1.082	
Household utensils and tools—Household utensils . . . . .	1.017	14.761	1.434	
Tools . . . . .	0.490			
Household supplies and services . . . . .	3.319		3.221	
Postal and telephone services—Postal charges . . . . .	0.341		1.123	
Telephone charges . . . . .	1.151			
Transportation—				
Private transport—Motor vehicle purchase . . . . .	5.523	18.453	4.926	18.448
Motor vehicle operation . . . . .	10.788		11.508	
Public transport fares . . . . .	2.142		2.011	
Tobacco and alcohol—				
Alcoholic beverages—Beer . . . . .	4.769	10.247	4.591	9.675
Wine . . . . .	1.180		2.115	
Spirits . . . . .	1.052			
Cigarettes and tobacco . . . . .	3.246		2.973	
Health and personal care—				
Health services—Hospital and medical . . . . .	0.889	3.950	3.468	5.915
Dental . . . . .	0.595			
Personal care products . . . . .	1.799		1.736	
Personal care services . . . . .	0.667		0.710	
Recreation—				
Books, newspapers, magazines . . . . .	1.428	7.878	1.625	7.436
Other recreation goods . . . . .	3.215		2.641	
Holiday accommodation . . . . .	0.921		0.891	
Other recreation services . . . . .	2.314		2.279	
Total . . . . .	100.000	100.000	100.000	100.000

(a) Percentage contributions shown are based on estimates of household expenditure for the year 1974-75, valued at September quarter 1976 and June quarter 1980, prices respectively.

**Comparison of the Linked Series:** The Consumer Price Index is a chain of 'fixed weight aggregative' indexes, with significant changes in composition and weighting made at the linking dates.

The 1977 Year Book includes details relating to changes made at the following linking dates: June quarter 1952; June quarter 1956; March quarter 1960; December quarter 1963; December quarter 1968; and December quarter 1973. Subsequent changes were as follows:

The Eighth Linked Series was introduced from the September quarter 1974 when the item 'Radio and television licenses' was deleted. This series comprised the following groups and weighting pattern (percentage contributions to the total index as at the September quarter 1974): 'Food group', 26.0; 'Clothing and drapery group', 13.2; 'Housing group', 15.6; 'Household supplies and equipment group', 11.2; and 'Miscellaneous group', 34.0 per cent (all groups, 100.0 per cent).

The Ninth Linked Series was introduced from the September quarter 1976 and involved changed quantity weights for all items. The weights were based on spending patterns of households in the capital city statistical divisions estimated from the results of the 1974-75 Household Expenditure Survey. The following items were added to the directly represented areas of expenditure: in the 'Food group'—meats out, fresh and frozen fish, oils and fats, cakes, fresh fruit and vegetables; in the 'Household equipment and operation group'—fertiliser, seeds, etc., insurance of dwellings and contents, travel goods, repairs to household goods; in the 'Transportation group'—motor vehicle comprehensive and third party property insurance, taxi and airfares, motor cycles; and in the 'Recreation group'—books, sound equipment, sports equipment, caravans, bicycles, toys, games, holiday accommodation, television hire, spectator admission, charges for sports services. A new group and sub-group structure, more consistent with international convention, has been adopted. The main changes were:

- (i) sub-division of the former 'Miscellaneous group' into four groups: 'Transportation', 'Health and personal care', 'Recreation' and 'Tobacco and alcohol';
- (ii) transfer of dry cleaning and shoe repairs to the 'Clothing group';
- (iii) transfer of postal and telephone services to the 'Household equipment and operation group'; and
- (iv) transfer of 'Drapery sub-group' from former 'Clothing and drapery group' to the 'Household equipment and operation group'.

As with previous series, the cost of land and interest charges on house purchases are not included in the new series.

Local quantity weights for the individual cities are used for some items.

### Consumer Price Index, Hobart

The Consumer Price Index for Hobart is compiled to base 1966-67=100.0, the number 100.0 being the base value for each of the major groups and also for the 'All groups' index (except for 'Health and personal care', base: December quarter 1968=100.0; and 'Recreation', base: September quarter 1976=100.0).

The following table shows group index numbers for Hobart on a financial year and quarterly basis (an annual index number is the average of the four respective quarterly index numbers):

Consumer Price Index: Hobart (a)  
(Base of Each Index: Year 1966-67=100.0) (b)

Year or quarter	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups
1974-75 .....	158.6	171.8	180.9	156.4	165.3	169.4	174.1	} n.a. {	166.7
1975-76 (c) .....	177.5	200.9	216.4	183.9	196.7	206.3	138.5		190.0
1976-77 (c) .....	201.5	232.5	244.9	201.8	220.7	222.0	250.3		217.7
1977-78 .....	224.3	257.1	264.6	222.0	241.6	232.2	302.6		239.1
1978-79 (c) .....	251.3	277.2	278.1	235.9	256.5	268.4	292.2		257.7
1979-80 (c) .....	286.8	297.6	293.7	257.2	291.5	289.1	319.8	128.5	284.0

**Consumer Price Index: Hobart (a)**  
(Base of Each Index: Year 1966-67=100.0) (b)—continued

Year or quarter	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups
1979—									
March .....	254.7	277.3	280.4	238.5	258.7	278.1	280.5	119.6	260.0
June .....	266.9	286.7	282.6	242.7	268.0	280.7	282.6	122.1	267.0
September ...	275.1	290.5	285.4	248.1	282.5	283.1	287.6	123.0	273.6
December (c)	283.8	295.8	291.7	251.9	287.7	287.5	324.7	126.6	281.2
1980—									
March .....	291.2	297.2	296.3	261.1	292.6	290.2	329.4	131.1	287.0
June .....	296.9	307.0	301.5	267.6	303.2	295.4	337.6	133.4	294.1

PERCENTAGE CHANGE: JUNE QUARTER 1980 OVER JUNE QUARTER 1979

	+11.2	+7.1	+6.7	+10.3	+13.1	+5.2	+19.5	+9.3	+10.1
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(a) Figures after the decimal point have limited significance; they are inserted to avoid the distortions that would occur in rounding.

(b) Except 'Health and personal care' (December quarter 1968 = 100.0) and 'Recreation' (September quarter 1976 = 100.0).

(c) The 'Health and personal care' and 'All groups' indexes were affected by changes in the financing of health services.

The following table shows the 'All groups' index number for Hobart, quarter by quarter, and also as averages for financial years:

**Consumer Price Index: All Groups Index Numbers, Hobart (a)**  
(Base of Index: Year 1966-67 = 100.0)

Year	Quarter ending—				Average for year	
	September	December	March	June	Index	Percentage change (b)
1974-75 .....	157.4	165.5	169.3	174.6	166.7	+16.9
1975-76 .....	(c) 175.9	189.1	194.2	200.6	(c) 190.0	(c) +14.0
1976-77 .....	205.5	(c) 217.2	221.4	226.7	(c) 217.7	(c) +14.6
1977-78 .....	232.0	238.1	240.8	245.5	239.1	+9.8
1978-79 .....	249.3	(c) 254.5	260.0	267.0	(c) 257.7	(c) +7.8
1979-80 .....	273.6	(c) 281.2	287.0	294.1	(c) 284.0	(c) +10.2

(a) Figures after decimal point have limited significance. They are inserted to avoid the distortions that would occur in rounding.

(b) Over preceding year.

(c) See footnote (c) to the previous table.

### Consumer Price Indexes: Capital Cities

**Six Capital Cities:** A consumer price index series is constructed for each state capital city. These indexes measure price movements in each city individually (but do not provide a basis for the comparison of the retail price level in one city with that in any other city). The six capital cities Consumer Price Index is derived as the weighted average of the indexes for the individual cities, the basis of weighting being their populations as recorded at successive censuses.

The next table summarises index numbers and percentage changes for the 'All groups' consumer price index for the six state capital cities combined:

**Consumer Price Index: All Groups**  
**Australia—Six State Capital Cities (a): Summary**  
**(Base of Index: Year 1966-67 = 100.0)**

Quarter	Quarter		Percentage change from same quarter of preceding year	Calendar year (b)		Fiscal year (b)	
	Index number	Percentage change (c)		Index number	Percentage change (c)	Index number	Percentage change (c)
1975—							
September (d) ..	181.6	+0.8	+12.1	181.9 (1975) (d)	(d) +15.1	193.3 (1975-76) (d)	(d) +13.0
December .....	191.7	+5.6	+14.0				
1976—							
March .....	197.4	+3.0	(d)+13.4	206.5 (1976) (d)	(d) +13.5	220.0 (1976-77) (d)	(d) +13.8
June .....	202.4	+2.5	(d)+12.3				
September .....	206.9	+2.2	(d)+13.9	231.9 (1977)	+12.3	241.0 (1977-78)	+9.5
December (d) ..	219.3	+6.0	+14.4				
1977—							
March .....	224.3	+2.3	(d)+13.6	250.3 (1978) (d)	(d) +7.9	260.7 (1978-79) (d)	(d) +8.2
June .....	229.6	+2.4	(d)+13.4				
September .....	234.1	+2.0	(d)+13.1	273.0 (1979) (d)	(d) +9.1	287.2 (1979-80) (d)	(d) +10.2
December .....	239.6	+2.3	+9.3				
1978—							
March .....	242.7	+1.3	+8.2	273.0 (1979) (d)	(d) +9.1	287.2 (1979-80) (d)	(d) +10.2
June .....	247.7	+2.1	+7.9				
September .....	252.5	+1.9	+7.9	273.0 (1979) (d)	(d) +9.1	287.2 (1979-80) (d)	(d) +10.2
December (d) ..	258.2	+2.3	+7.8				
1979—							
March .....	262.6	+1.7	(d)+8.2	273.0 (1979) (d)	(d) +9.1	287.2 (1979-80) (d)	(d) +10.2
June .....	269.6	+2.7	(d)+8.8				
September .....	275.8	+2.3	+9.2	273.0 (1979) (d)	(d) +9.1	287.2 (1979-80) (d)	(d) +10.2
December (d) ..	284.1	+3.0	(d)+10.0				
1980—							
March .....	290.3	+2.2	(d)+10.5	273.0 (1979) (d)	(d) +9.1	287.2 (1979-80) (d)	(d) +10.2
June .....	298.4	+2.8	(d)+10.7				

(a) Weighted average of six state capital cities combined.

(b) Calendar year and fiscal year index numbers are averages of the four respective quarterly index numbers.

(c) Over preceding period (year or quarter).

(d) Affected by changes in the financing of health services.

The next table includes details for the 'All groups excluding hospital and medical services' index. This facilitates the analysis of trends in retail prices by excluding the effects of the unusual changes in hospital and medical services for the September and December quarters of 1975 (following the introduction of Medibank), for the December quarter 1976 (following changes to Medibank), and for the December quarters of 1978 and 1979 (following changes in the financing of health services).

**Consumer Price Index, Six State Capital Cities, Australia (a)**  
**All Groups and All Groups Excluding Hospital and Medical Services**

Quarter	All groups				All groups excluding hospital and medical services			
	Index number	Percentage increase over preceding quarter	Equivalent annual rate (b) (per cent)	Percentage increase over same quarter of previous year	Index number	Percentage increase over preceding quarter	Equivalent annual rate (b) (per cent)	Percentage increase over same quarter of previous year
1975—								
March .....	174.1	3.6	15.2	17.6	172.4	2.9	12.1	16.7
June .....	180.2	3.5	14.8	16.9	178.8	3.7	15.6	16.2
September .....	(c) 181.6	(c) 0.8	(c) 3.2	(c) 12.1	184.0	2.9	12.1	13.8
December .....	(c) 191.7	(c) 5.6	(c) 24.4	(c) 14.0	195.6	6.3	27.7	16.7

**Consumer Price Index, Six State Capital Cities, Australia (a)**  
**All Groups and All Groups Excluding Hospital and Medical Services—continued**

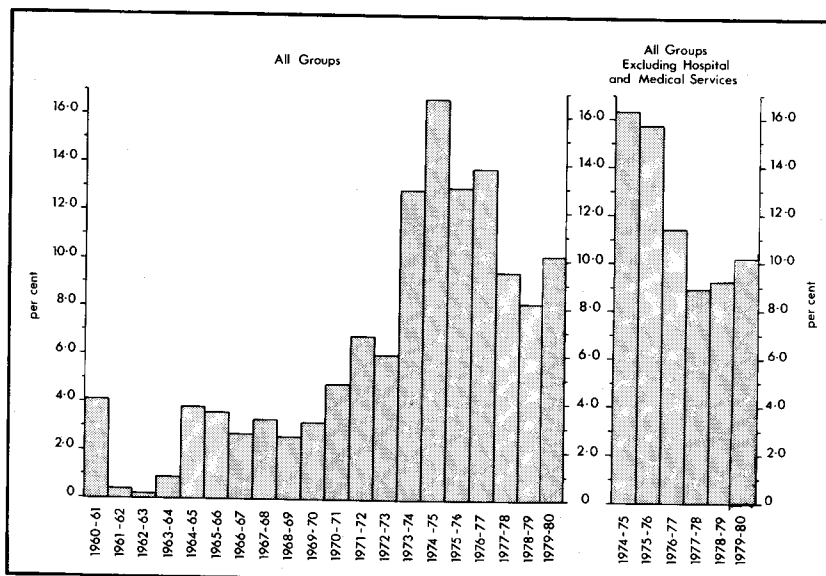
Quarter	All groups				All groups excluding hospital and medical services			
	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year	Index number	Per-centage increase over preceding quarter	Equiv-alent annual rate (b) (per cent)	Per-centage increase over same quarter of previous year
1976—								
March .....	197.4	3.0	12.6	(c) 13.4	201.3	2.9	12.1	16.8
June .....	202.4	2.5	10.4	(c) 12.3	206.3	2.5	10.4	15.4
September .....	206.9	2.2	9.1	(c) 13.9	210.8	2.2	9.1	14.6
December .....	(c) 219.3	(c) 6.0	(c) 26.2	(c) 14.4	216.8	2.8	11.7	10.8
1977—								
March .....	224.3	2.3	9.5	(c) 13.6	221.9	2.4	10.0	10.2
June .....	229.6	2.4	10.0	(c) 13.4	227.3	2.4	10.0	10.2
September .....	234.1	2.0	8.2	(c) 13.1	232.0	2.1	8.7	10.1
December .....	239.6	2.3	9.5	9.3	237.7	2.5	10.4	9.6
1978—								
March .....	242.7	1.3	5.3	8.2	240.6	1.2	4.9	8.4
June .....	247.7	2.1	8.7	7.9	245.0	1.8	7.4	7.8
September .....	252.5	1.9	7.8	7.9	249.5	1.8	7.4	7.5
December .....	(c) 258.2	(c) 2.3	(c) 9.5	(c) 7.8	259.0	3.8	16.1	9.0
1979—								
March .....	262.6	1.7	7.0	(c) 8.2	263.5	1.7	7.0	9.5
June .....	269.6	2.7	11.2	(c) 8.8	270.6	2.7	11.2	10.4
September .....	275.8	2.3	9.5	(c) 9.2	277.0	2.4	10.0	11.0
December .....	(c) 284.1	(c) 3.0	(c) 12.6	(c) 10.0	283.5	2.3	9.5	9.5
1980—								
March .....	290.3	2.2	9.1	(c) 10.5	289.8	2.2	9.1	10.0
June .....	298.4	2.8	11.7	(c) 10.7	298.2	2.9	12.1	10.2

(a) Weighted average of the six state capitals combined. Base year: 1966-67 = 100.0.

(b) Quarterly rate compounded over four quarters, e.g. 4.0 per cent per quarter is equivalent to 17.0 per cent p.a. ( $1.04 \times 1.04 \times 1.04 \times 1.04 = 1.17$ ).

(c) Affected by changes in the financing of health services.

**Consumer Price Index: Weighted Average of the Six State Capital Cities,  
 Percentage Increase Over Preceding Year**





### Consumer (Retail) Price Indexes, Various Countries

The following table shows consumer (retail) price indexes for selected countries. It should be noted that the items priced and the weighting patterns used in constructing the indexes vary widely from country to country.

Consumer (Retail) Price Indexes: Various Countries (a)  
(Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)

Year	Australia (b)	France	Federal Repub. of Germany	Italy	Japan	New Zealand	Switz- erland	United King- dom	U.S.A.
INDEX NUMBERS (Base of each index: Year 1970 = 100.0)									
1974.....	141.5	r 136.7	127.1	146.3	r 154.1	r 142.1	135.7	148.4	127.0
1975.....	162.8	r 152.8	134.7	171.1	172.4	r 162.8	144.8	184.4	138.6
1976.....	r 184.9	166.9	r 140.4	199.8	188.4	r 190.3	147.3	214.9	146.6
1977.....	207.6	183.2	r 145.6	236.6	203.6	r 217.7	149.2	249.0	156.1
1978.....	224.0	199.8	r 149.6	265.3	211.4	243.7	150.8	269.6	167.9
1979.....	244.3	220.8	155.8	304.5	219.0	277.2	156.2	305.8	187.2
PERCENTAGE INCREASE OVER PREVIOUS YEAR									
1974.....	15.1	r 13.7	7.0	19.1	r 24.3	r 11.2	9.8	15.9	11.0
1975.....	15.1	r 11.8	6.0	17.0	r 11.9	r 14.6	6.7	24.3	9.1
1976.....	r 13.6	r 9.2	r 4.2	16.8	9.3	16.9	1.7	16.5	5.8
1977.....	12.3	9.8	r 3.7	18.4	8.1	r 14.4	1.3	15.9	6.5
1978.....	7.9	9.1	r 2.7	12.1	3.8	r 11.9	1.1	8.3	7.6
1979.....	9.1	10.5	4.1	14.8	3.6	13.7	3.6	13.4	11.5

(a) The items priced and the levels at which they are priced in these indexes vary widely from country to country.

(b) Consumer Price Index converted to base: year 1970 = 100.0.

### Average Prices of Foodstuffs, Hobart

The average retail prices of selected foodstuffs in Hobart since 1975 are shown in the next table. The list, while representative of foodstuffs commonly consumed, is not exhaustive; for a description of foodstuffs in the Consumer Price Index regimen, see the earlier table 'Consumer Price Index, Percentage Contributions to the Total Index Aggregate'.

Average Retail Prices of Selected Food Items: Hobart (a)  
(Cents)

Item	Unit	1975	1976	1977	1978	1979	
						Average price	Percentage increase (b)
Groceries, etc.—							
Bread, ordinary white, sliced (d)	680 g	(c) 42.0	45.1	48.8	52.0	57.0	9.6
Flour, self-raising	1 kg	38.3	47.0	50.9	53.3	55.0	3.2
Tea	250 g	49.7	53.0	92.3	88.5	79.5	-10.2
Coffee, instant	150 g	n.a.	159.2	283.2	284.0	270.0	-4.9
Sugar	2 kg	52.4	56.7	63.5	68.8	85.3	24.0
Rice	500 g	26.5	31.7	35.5	37.8	39.3	4.0
Breakfast cereal, corn based	500 g	60.6	66.3	71.5	75.3	82.3	9.3
Peaches, canned	825 g	51.7	64.5	70.0	71.3	75.8	6.3
Potatoes	1 kg	19.6	33.7	26.6	35.8	39.5	10.3
Onions	1 kg	34.8	43.4	47.3	47.3	53.0	12.1
Dairy produce, etc.—							
Butter	500 g	77.0	85.2	91.5	91.3	94.8	3.8
Cheese, processed	250 g	45.5	48.5	54.0	57.3	59.0	3.0
Margarine, table, poly-unsaturated	500 g	78.7	78.1	84.9	84.0	92.0	9.5
Eggs	1 doz (55 g)	93.7	109.2	123.4	128.5	138.5	7.8

Average Retail Prices of Selected Food Items: Hobart (a)—continued  
(Cents)

Item	Unit	1975	1976	1977	1978	1979	
						Average price	Percentage increase (b)
Bacon, rashers, pre-pack	250 g	91.9	111.6	123.0	126.5	149.5	18.2
Milk, fresh, bottled, delivered	2 × 600 ml	33.6	36.0	40.5	47.0	49.3	4.9
Meat—							
Beef—							
Rump steak	1 kg	287.0	323.4	354.7	391.5	580.0	48.1
Silverside, corned	1 kg	180.8	201.1	218.7	247.5	379.5	53.3
Lamb—							
Leg	1 kg	171.5	197.1	238.9	269.8	332.8	23.4
Loin chops	1 kg	173.1	198.2	240.0	277.8	349.3	25.7
Pork, leg	1 kg	256.6	302.7	326.1	344.5	415.3	20.6

(a) The table units are not necessarily those for which the original price data were obtained; in such cases, prices have been calculated for the table unit.

(b) Over the corresponding average 1978 price.

(c) Average price for six months only.

(d) From June quarter 1979, supermarket sales only.

### Indexes of Relative Retail Prices of Food

The table below shows indexes of relative retail prices of food for the six state capitals, Canberra and Darwin, and for selected Tasmanian towns, as at March, for recent years. The indexes for each year are expressed to the base: weighted average of the six state capitals = 100. For a particular year, they show comparative retail prices based on the same selected 'basket' of food and grocery items and the same weighting pattern for each locality. The items priced for calculation of the indexes are generally those priced for the Monthly Food Index for March of the Consumer Price Index of the same year but excluding snacks and take-away foods (the annual *Indexes of Retail Prices of Food in Queensland Towns* (6401.3) published by the Queensland office of the Bureau lists the food items included for the year to which it relates). The indexes compare relative retail prices of food in various localities at each point in time; they do not show movement over time in each locality. Price data used for derivation of the indexes has been collected in special surveys of retail prices undertaken in March each year.

Index Numbers of Relative Retail Prices of Food Items (a)  
(Base: weighted average of the six state capitals at each point of time = 100)

City or town	At March							
	1973	1974	1975	1976	1977	1978	1979	1980
Sydney	100	101	102	101	99	98	99	99
Melbourne	101	99	97	98	99	99	100	99
Brisbane	101	102	100	101	101	101	100	101
Adelaide	98	99	101	102	103	102	103	102
Perth	98	96	103	101	102	105	103	101
Hobart	99	99	102	104	106	106	104	104
Canberra	106	105	104	105	105	103	104	102
Darwin	119	119	120	121		115	111	114
Launceston	97	98	97	100		102	103	104
Devonport	99	97	97	101	n.a.	103	104	105
Burnie	98	97	97	101		104	102	103
Queenstown	105	107	108	108		111	107	107

(a) These indexes compare retail prices between various localities of a selected basket of food items at each point in time. They do not show movement over time in each locality.

The indexes are subject to the following limitations:

- (i) As the indexes are compiled by pricing, in each town or city, the same list of major food items, specified as to quantity and as far as possible as to quality, the comparisons measure relative retail prices only for the field covered by the selected items as combined by a common set of weights. They cannot be considered as reflecting relative prices in other fields of expenditure. A common list of items or 'basket' such as this *does not reflect differences in living costs which result directly from differences in modes of living*, e.g. as reflected by climate and availability of items, etc., or levels of living between localities. Users of these indexes should bear in mind that the degree of appropriateness of the items and weights used would vary from centre to centre, and that the differences in price levels as indicated by the indexes should be regarded as approximations only.
- (ii) In some instances, the relationship between towns in March of one year may differ from that existing between them at another date during that year or in other years, because seasonal influences on prices of some items, e.g. potatoes and meat, may occur at different times in different localities. In these circumstances *it is desirable to study the run of index numbers for a number of years.*

### Wholesale Price Indexes

#### General

The Bureau compiles several wholesale price indexes of basic materials. These include the 'Wholesale Price Index of Materials used in House Building' and the 'Wholesale Price Index of Materials used in Building other than House Building'. The *Price Index of Materials Used in the Manufacturing Industry* (for Australia) was first published by the Bureau in July 1975 and the *Price Index of Articles Produced by Manufacturing Industry* in October 1976.

#### Wholesale Price Index of Materials Used in House Building

**General:** This index is complementary to the 'Other than House Building' index and measures the change in prices of selected materials used in house construction.

**Scope and Composition:** The materials selected and weights given to the items were in accordance with the usage of materials in a sample of representative house types constructed in or about 1968-69. The house types included in the sample were those using brick, brick veneer, timber or asbestos-cement sheeting for the outer-walls. Within the four major construction types account was taken of a range of characteristics, e.g. material used for internal partitions, window frames, roofs, etc. The number of items included in the index range from 49 (Brisbane) to 51 (Perth). The items are combined into 11 groups; an 'All groups' index is also published. Standards are fixed and price movements are for items of a constant quality.

**Derivation of Items and Weights:** The index is a fixed quantity weights index and is calculated by the method known as the 'weighted arithmetic mean of price relatives'. The items and weights used are based on the reported values of materials used in the selected houses in each state capital city urban area. Information about materials used and their value was obtained for a total of 114 houses. The material values derived for each state capital city were then used to develop weighting patterns for the individual cities and aggregated to give a weighting pattern for the six state capital cities combined.

**Base Period:** The index has a base year 1966-67 = 100.0 but the weighting pattern is more appropriate to material usage during 1968-69.

**Prices:** Prices relate to specified standards for each commodity and are obtained in all state capital city urban areas from representative suppliers of materials used in house building. The prices are collected as at the mid-point of the month to which the index refers.

**Index Numbers:** The index has been compiled for each month from July 1966 and for financial years from 1966-67. Index numbers are published for each group and combined into an all groups number for each state capital city and the six state capital cities combined.

The following table compares movements in the index numbers for each of the six capital cities and six capitals combined for recent years. (The separate city indexes allow comparisons to be drawn between capital city areas as to differences in the degree of price movement from period to period, but not as to differences in price levels.)

**Wholesale Price Index of Materials Used in House Building**  
**All Groups Index Numbers: Six State Capital Cities**  
**(Base of Each Index: Year 1966-67 = 100.0)**

Year or month	State capital cities						Six capitals (a)	
	Sydney	Mel-bourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percentage change (b)
1974-75 .....	189.4	178.4	187.0	195.4	172.4	179.1	183.4	+21.2
1975-76 .....	211.1	200.1	218.5	222.5	201.9	209.2	208.1	+13.5
1976-77 .....	234.5	223.6	243.5	250.7	229.8	235.1	232.9	+11.9
1977-78 .....	254.0	238.6	265.1	270.7	253.4	256.7	252.0	+8.2
1978-79 .....	272.7	251.4	281.3	292.1	268.2	273.6	268.1	+6.4
1979-80 .....	309.5	283.4	315.0	338.5	299.4	304.2	302.9	+13.0
1979—								
March .....	278.2	255.9	287.0	300.6	274.8	279.7	273.7	+3.4
June .....	285.9	261.5	291.5	311.2	278.8	288.3	280.2	+2.4
September .....	297.7	270.2	302.0	325.8	288.5	294.1	290.6	+3.7
December .....	304.4	277.1	308.4	334.5	294.0	301.1	297.4	+2.3
1980—								
March .....	320.8	295.4	328.4	349.6	309.7	311.1	314.4	+5.7
June .....	330.0	307.6	339.6	361.7	319.5	323.4	325.2	+3.4
PERCENTAGE CHANGE: JUNE 1980 OVER JUNE 1979								
	+15.4	+17.6	+16.5	+16.2	+14.6	+12.2	+16.1	..

(a) Weighted average of six state capital cities.

(b) Over preceding year or preceding month shown.

Index numbers for the Hobart capital city urban area for each group of items are given in the next table:

**Wholesale Price Index of Materials Used in House Building**  
**Group Index Numbers: Hobart**  
**(Base of Each Index: Year 1966-67 = 100.0)**

Year or month	Concrete mix, cement and sand	Cement products	Clay bricks, tiles, etc.	Timber, board and joinery	Steel products	Other metal products
Value weight (a) ...	7.25%	7.01%	10.14%	38.15%	7.49%	7.93%
1974-75 .....	157.6	178.6	201.0	192.5	188.7	160.2
1975-76 .....	184.9	205.9	244.0	226.6	224.2	181.8
1976-77 .....	205.0	231.6	272.1	257.4	254.7	201.4
1977-78 .....	219.5	253.0	306.4	282.3	279.2	218.4
1978-79 .....	227.3	278.6	326.6	300.7	297.9	231.9
1979-80 .....	246.9	309.5	354.2	337.1	329.1	271.4
1979—						
March .....	221.9	277.2	333.1	311.8	307.7	237.1
June .....	233.4	294.8	333.1	323.1	309.7	246.9
September .....	242.6	295.9	347.9	326.0	320.8	254.0
December .....	245.3	314.1	355.3	333.1	323.5	264.6

**Wholesale Price Index of Materials Used in House Building**  
**Group Index Numbers: Hobart**  
**(Base of Each Index: Year 1966-67 = 100.0)—continued**

Year or month	Concrete mix, cement and sand	Cement products	Clay bricks, tiles, etc.	Timber, board and joinery	Steel products	Other metal products
1980—						
March .....	251.0	316.9	368.2	339.6	337.3	290.3
June .....	260.5	318.3	368.2	362.7	352.0	295.1
PERCENTAGE CHANGE: JUNE 1980 OVER JUNE 1979						
	+11.6	+8.0	+10.5	+12.3	+13.7	+19.5

**Wholesale Price Index of Materials Used in House Building**  
**Group Index Numbers: Hobart—continued**  
**(Base of Each Index: Year 1966-67 = 100.0)**

Year or month	Plumbing fixtures, etc.	Electrical installation materials	Installed appliances	Plaster and plaster products	Miscellaneous materials	All groups	
						Index number	Percentage change (b)
Value weights (a) .....	2.74%	1.61%	6.98%	4.99%	5.71%	100.00%	..
1974-75 .....	173.2	162.4	130.3	157.0	178.6	179.1	+23.1
1975-76 .....	202.2	174.6	136.9	188.3	204.8	209.2	+16.8
1976-77 .....	228.2	191.8	148.0	202.2	234.0	235.1	+12.4
1977-78 .....	247.4	201.2	154.9	218.2	250.8	256.7	+9.2
1978-79 .....	258.5	224.5	161.6	229.6	273.5	273.6	+6.6
1979-80 .....	293.5	265.3	169.5	244.7	307.0	304.2	+11.2
1979—							
March .....	260.0	233.5	162.0	231.4	279.6	279.7	+4.1
June .....	271.0	240.1	167.3	234.2	284.8	288.3	+3.1
September .....	278.9	247.1	168.3	241.2	290.2	294.1	+2.0
December .....	285.4	263.0	168.3	243.2	299.3	301.1	+2.4
1980—							
March .....	308.5	287.7	170.0	248.6	318.1	311.1	+3.3
June .....	308.5	282.4	173.6	252.9	332.1	323.4	+4.0
PERCENTAGE CHANGE: JUNE 1980 OVER JUNE 1979							
	+13.8	+17.6	+3.8	+8.0	+16.6	+12.2	..

(a) Composition and weighting pattern as at reference base year.

(b) Over preceding year or preceding month shown.

**Wholesale Price Index of Materials Used in Building Other than House Building**

*General:* This was the first of a series of indexes designed to replace the obsolete Wholesale Price (Basic Materials and Foodstuffs) Index. The index measures changes in the prices of selected materials used in the construction of buildings other than houses and 'low-rise' flats (in general, those up to three storeys).

*Prices:* Price series used relate to specified standards of each commodity and are obtained in all state capital city urban areas from representative supplies of materials used in building. In the main they are collected as at the mid-point of the month to which the index refers, or as near thereto as practicable. There are some exceptions to the use of local prices in the indexes for each capital city area. In a few cases where suitable price series are not currently available for an item in a given city, imputation is necessary. For each capital city area, the whole of the group 'electrical installation materials' and the majority of the items in the group 'mechanical services components' are based on Sydney and Melbourne price series.

**Base Period:** The reference base of the index is the year 1966-67 = 100.0 The index is a fixed quantity weights index and is calculated by the method known as the 'weighted arithmetic mean of price relatives'.

**Scope and Composition:** Composition of the index is in accordance with actual material usage in building projects which were selected as being representative for purposes of determining weighting patterns. Completed values of the types of buildings selected constituted 86 per cent of all completed new buildings other than houses and low-rise flats in the period 1964-65 to 1966-67. Buildings for entertainment, recreation and religious purposes together with buildings in the building statistics category 'miscellaneous buildings' are not directly represented.

The index comprises 72 items combined into 11 groups. Items are described in terms of fixed specifications with the aim of recording price changes for representative materials of constant quality.

The following table compares movements in the index numbers for each of the six capital cities and the six capitals combined:

**Wholesale Price Index of Materials Used in Building Other Than House Building**  
All Groups Index Numbers: Six State Capital Cities  
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	State capital cities						Six capitals (a)	
	Sydney	Mel-bourne	Brisbane	Adelaide	Perth	Hobart	Index number	Percent-age change (b)
1974-75 .....	176.0	180.6	186.6	181.0	176.7	179.3	179.2	+22.9
1975-76 .....	199.0	209.4	216.3	210.4	208.3	210.4	206.2	+15.1
1976-77 .....	221.5	234.8	241.2	234.3	235.4	234.8	230.3	+11.7
1977-78 .....	239.9	254.4	260.9	254.2	258.3	253.7	249.7	+8.4
1978-79 .....	259.2	271.4	278.6	274.4	276.8	270.5	268.1	+7.4
1979-80 .....	293.4	306.6	313.4	314.3	309.7	301.8	303.0	+13.0
1979—								
March .....	265.7	278.7	284.9	283.8	282.9	276.8	275.0	+4.0
June .....	269.6	283.2	289.0	289.6	287.0	281.7	279.3	+1.6
September .....	280.5	294.2	300.6	300.7	297.0	291.3	290.2	+3.9
December .....	289.6	303.1	309.4	310.1	306.7	298.4	299.3	+3.1
1980—								
March .....	305.0	317.5	323.9	326.5	319.2	311.5	314.1	+4.9
June .....	312.8	327.4	335.6	336.8	330.6	320.0	323.6	+3.0
PERCENTAGE CHANGE: JUNE 1980 OVER JUNE 1979								
	+16.0	+15.6	+16.1	+16.3	+15.2	+13.6	+15.9	..

(a) Weighted average of six state capital cities.

(b) Over preceding year or preceding month shown.

The separate city indexes measure price movements within each metropolitan area individually. They enable comparisons to be drawn between metropolitan areas as to differences in degree of price movement from period to period, but not as to differences in price level. The six state capitals combined index is a weighted average of the individual indexes for each city, weighted on the basis of estimated value on completion of building other than house building in the separate states over a fixed period.

Index numbers for the Hobart urban area for each group of items are given in the following table:

**Wholesale Price Index of Materials Used in Building Other Than House Building Group Index Numbers: Hobart**  
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Concrete mix cement, sand, etc.	Cement products	Bricks, stone, etc.	Timber, board and joinery	Steel and iron products	Aluminium products
Value weight (a) .....	10.41%	3.64%	5.28%	11.90%	30.58%	6.01%
1974-75 .....	157.5	179.5	197.6	191.2	195.0	149.1
1975-76 .....	185.3	207.8	238.1	222.4	236.9	176.2
1976-77 .....	206.2	236.5	262.6	249.5	262.9	199.0
1977-78 .....	220.9	258.8	290.6	269.8	282.1	218.4
1978-79 .....	230.6	277.4	310.1	286.5	297.3	229.2
1979-80 .....	252.6	298.4	336.5	316.3	327.5	268.7
1979—						
March .....	225.4	278.5	321.1	294.8	305.9	229.7
June .....	236.8	284.6	321.1	301.3	307.8	240.5
September .....	247.2	285.4	337.0	305.7	318.3	254.8
December .....	251.0	299.7	337.0	312.1	324.9	257.2
1980—						
March .....	258.7	305.2	342.9	320.3	336.1	282.9
June .....	267.4	308.7	343.0	339.9	346.8	302.3
PERCENTAGE CHANGE: JUNE 1980 OVER JUNE 1979						
	+12.9	+8.5	+6.8	+12.9	+12.8	+25.7

**Wholesale Price Index of Materials Used in Building Other Than House Building Group Index Numbers: Hobart—continued**  
(Base of Each Index: Year 1966-67 = 100.0)

Year or month	Other metal products	Plumbing fixtures	Miscellaneous materials	Electrical installation materials (b)	Mechanical services components (b)	All groups	
						Index number	Percentage change (c)
Value weight (a) .....	2.59%	1.19%	7.09%	8.61%	12.70%	100.00%	
1974-75 .....	168.8	189.4	161.1	157.4	181.3	179.3	+24.8
1975-76 .....	176.5	221.6	188.1	177.4	201.7	210.4	+17.3
1976-77 .....	193.4	246.5	209.9	199.6	226.3	234.8	+11.6
1977-78 .....	206.3	259.0	225.5	215.3	247.8	253.7	+8.0
1978-79 .....	231.3	268.6	241.6	242.6	268.5	270.5	+6.6
1979-80 .....	290.2	304.9	272.4	285.4	298.3	301.8	+11.6
1979—							
March .....	244.6	271.8	244.5	255.2	274.5	276.8	+3.4
June .....	258.5	281.6	251.9	257.6	277.2	281.7	+1.8
September .....	264.2	288.4	259.8	271.0	285.8	291.3	+3.4
December .....	281.0	293.4	267.2	282.8	295.6	298.4	+2.4
1980—							
March .....	322.9	321.2	281.2	304.9	306.8	311.5	+4.4
June .....	305.3	326.1	294.6	297.2	314.1	320.0	+2.7
PERCENTAGE CHANGE: JUNE 1980 OVER JUNE 1979							
	+18.1	+15.8	+17.0	+15.4	+13.3	+13.6	..

(a) Composition and weighting pattern as at reference base year.

(b) The whole of the group 'Electrical installation materials' and the majority of items in the group 'Mechanical services components' are based on Melbourne and Sydney price series.

(c) Over preceding year or preceding month shown.

### Australian Export Price Index

In July 1979, the revised Export Price Index on reference base 1974-75 = 100 was introduced, replacing the previous index which had a reference base of 1959-60 = 100.

The revised index is a fixed weights index and is weighted using the pattern of Australian exports during the three years 1974-75, 1975-76 and 1976-77. It has a more comprehensive coverage of exports than the former index; in particular exports of manufactured goods are covered more fully.

The revised Export Price Index relates to all exports of merchandise from Australia. It includes re-exports of merchandise (that is, goods which are imported into Australia and exported at a later date without physical transformation). The index numbers for each month relate to prices of those exports of merchandise that are physically shipped from Australia during that month.

The commodities directly represented in the index were selected on the basis of their export values in the years 1974-75, 1975-76 and 1976-77. They were allocated weights in accordance with the average value of exports for each commodity over the period 1974-75 to 1976-77. The 1975-76 and 1976-77 export values for each commodity were revalued at 1974-75 prices before averaging.

In general, prices are obtained from major exporters of the selected commodities included in the index. The point of pricing for the Export Price Index is the point at which the goods physically leave Australia, that is prices are on the basis f.o.b. at main Australian ports of export.

As the prices used in the index are expressed in Australian currency, changes in the relative values of the Australian dollar and overseas currencies can have a direct impact on price movements for the many commodities that are sold in currencies other than Australian dollars. Where exports are sold at prices expressed in terms of a foreign currency and forward exchange cover is used, the prices used in the index exclude forward exchange cover.

The price series used relate to specified standards, grades, types, etc. of each commodity with the aim of incorporating in the index price changes for exports of representative goods of constant quality. Wherever possible, prices to predominant export markets are used for each of the specified goods priced, in order to lessen the impact of price variations attributable solely to changes, over time, in market destinations. In most cases prices are combined using fixed weights between markets. Weights between markets are reviewed from time to time and revised where necessary.

Export Price Index Numbers: Australia  
(Base of Each Index: Year 1974-75 = 100)

Year or month	Meat and meat preparations	Dairy products and eggs	Fish and fish preparations	Cereals and cereal preparations	Fruit and vegetables	Sugar and sugar preparations	Hides, skins and furskins raw
1974-75 .....	100	100	100	100	100	100	100
1975-76 .....	115	93	138	94	98	89	123
1976-77 .....	125	94	185	89	108	83	188
1977-78 .....	154	107	200	81	160	72	198
1978-79 .....	234	113	229	86	167	74	308
1979-80 p .....	285	123	230	107	184	95	326
1979—							
March .....	259	115	242	87	176	77	383
June .....	283	116	244	93	177	79	408
September .....	279	120	240	99	179	79	363
December .....	301	122	235	102	181	88	335
1980—							
March .....	294	127	225	114	183	109	309
June p .....	262	127	214	116	191	128	238



**Export Price Index Numbers: Australia—continued**  
(Base of Each Index: Year 1974-75 = 100)

Year or month	Textile fibres and their wastes	Metal-liferous ores and metal scrap	Coal, coke and briquettes	Petroleum, petroleum products and related materials	Animal oils and fats	Manufactures of iron and steel	Manufacturers of non-ferrous metals
1974-75 .....	100	100	100	100	100	100	100
1975-76 .....	105	119	152	119	98	84	93
1976-77 .....	135	140	164	137	117	91	123
1977-78 .....	139	151	176	141	136	96	125
1978-79 .....	153	157	178	157	157	118	161
1979-80 p .....	181	189	180	241	169	145	255
1979—							
March .....	151	159	178	165	164	124	183
June .....	170	173	176	192	177	141	211
September .....	170	176	177	213	175	145	226
December .....	186	186	179	232	171	146	263
1980—							
March .....	193	199	182	272	163	146	310
June p .....	187	202	178	273	158	145	219

**Export Price Index Numbers: Australia—continued**  
(Base of Each Index: Year 1974-75 = 100)

Year or month	Power generating machinery and equipment	Specialised machinery for particular industries	Road vehicles	Gold	All groups	
					Index	Percentage change (a)
1974-75 .....	100	100	100	100	100	—
1975-76 .....	114	126	117	91	109	+9.0
1976-77 .....	119	147	130	95	122	+11.9
1977-78 .....	139	166	145	120	128	+4.9
1978-79 .....	154	178	154	165	144	+12.5
1979-80 p .....	173	195	166	347	174	+20.8
1979—						
March .....	161	179	154	179	149	+6.4
June .....	161	181	156	209	161	+8.1
September .....	168	191	161	227	164	+1.9
December .....	169	192	174	331	174	+6.1
1980—						
March .....	181	199	175	424	185	+6.3
June p .....	182	205	177	431	179	—3.2

(a) Over preceding year or month shown.

**Price Indexes and Inflation**

There is no practical means available for *directly and precisely* measuring the rate of inflation, as this would entail regular measurement of both the price and volume of *all* goods and services sold and an ability to take into account constantly changing standards, qualities and types of these goods and services. However, price indexes, although not a true measure of inflation, are often used as giving the best available rough indication of the rate of inflation.

When a rate of inflation is stated for a particular country, the rate of increase in the official retail price index has usually been quoted. However, any such measure actually relates only to purchasing power with respect to the 'Basket' of items in the particular index used, combined in their specified proportions. Retail price indexes *do not* measure changes in raw material prices, wholesale prices, industrial plant and equipment costs, etc., and, therefore,

cannot be regarded as measuring the trend in the overall internal price structure of an economy (i.e. the rate of inflation).

For a more detailed coverage of this topic, see the article under the above heading in the 1976 *Year Book*. The table below shows, for recent years, the varying results obtained when different price index series are used as a measure of the change in prices and of purchasing power:

Selected Price Indexes: Comparison

Year	Consumer price index (a)			Price index of materials used in—			Australian G.D.P. implicit price deflator (c) <i>r</i>
	Hobart, all groups	Six state capitals combined		House building, Hobart (a)	Manufacturing industry, Australia (b)		
		All groups	Excluding hospital and medical services		Imported materials	All groups	
INDEX NUMBERS							
1974-75 .....	166.7	171.1	170.1	179.1	181.5	145.1	100.0
1975-76 .....	190.0	193.3	196.8	209.2	202.9	158.6	114.8
1976-77 .....	217.7	220.0	219.2	235.1	233.2	182.1	127.4
1977-78 .....	239.1	241.0	238.8	256.7	257.0	198.5	137.8
1978-79 .....	257.7	260.7	260.7	273.6	275.7	<i>r</i> 248.8	148.5
1979-80 .....	284.0	287.2	287.1	304.2	366.4	321.7	163.5

PERCENTAGE INCREASE OVER PRECEDING YEAR

1974-75 .....	16.9	16.7	16.3	23.1	42.8	7.7	18.3
1975-76 .....	14.0	13.0	15.7	16.8	11.8	9.3	14.8
1976-77 .....	14.6	13.8	11.4	12.4	14.9	14.8	11.0
1977-78 .....	9.8	9.5	8.9	9.2	10.2	9.0	8.2
1978-79 .....	7.8	8.2	9.2	6.6	7.3	r 25.3	7.8
1979-80 .....	10.2	10.2	10.1	11.2	32.9	29.3	10.1

PRICE (d) OF AN ARTICLE WORTH \$100 IN 1974-75 IF ITS PRICE INCREASED AT THE SAME RATE AS THE RESPECTIVE PRICE INDEX (\$)

1974-75 .....	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1975-76 .....	113.98	112.97	115.70	116.81	111.79	109.30	114.80
1976-77 .....	130.59	128.58	128.87	131.27	128.48	125.50	127.43
1977-78 .....	143.43	140.85	140.39	143.33	141.60	136.80	137.88
1978-79 .....	154.59	152.37	153.26	152.76	151.90	171.47	148.63
1979-80 .....	170.37	167.86	168.78	169.85	201.87	221.71	163.64

VALUE OF A \$1 NOTE EXPRESSED IN TERMS OF 1974-75 VALUES IF THE RESPECTIVE PRICE INDEX IS TAKEN AS A MEASURE OF INFLATION (\$)

1974-75 .....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1975-76 .....	0.87	0.89	0.86	0.86	0.89	0.91	0.87
1976-77 .....	0.77	0.78	0.78	0.76	0.78	0.80	0.78
1977-78 .....	0.70	0.71	0.71	0.70	0.71	0.73	0.73
1978-79 .....	0.65	0.66	0.65	0.65	0.66	0.58	0.67
1979-80 .....	0.59	0.60	0.59	0.59	0.50	0.45	0.61

(a) Base of each index: year 1966-67 = 100.0.

(b) Base of each index: year 1968-69 = 100.0.

(c) Index based on estimates of Australian Gross Domestic Product at current prices and at average 1974-75 prices available in September 1980, not a fixed weights index (see 'Implicit Price Deflators' in the section on Australian National Accounts in Chapter 18).

(d) Average price of the article during a particular year; these figures (rounded) can also be used as the respective indexes to the new base: year 1974-75 = 100.0.

The next table demonstrates the (compounding) effects of a range of constant rates of price increase over a 20-year period. In real life, prices never maintain a constant rate of change and rates of price changes vary widely for different groups of items. Nevertheless, this table is still useful for demonstrating the type of effect that would result from various constant rates of price increase.

**The Effect of Various Rates of Price Increase**

Number of years from base year	Annual rate of price increase (per cent)					
	5	10	15	20	25	30
PRICE OF AN ARTICLE ORIGINALLY WORTH \$100 (\$) (a)						
0 (base year) .....	100.00	100.00	100.00	100.00	100.00	100.00
1 .....	105.00	110.00	115.00	120.00	125.00	130.00
2 .....	110.25	121.00	132.25	144.00	156.25	169.00
3 .....	115.76	133.10	152.09	172.80	195.31	219.70
4 .....	121.55	146.41	174.90	207.36	244.14	285.61
5 .....	127.63	161.05	201.14	248.83	305.18	371.29
10 .....	162.89	259.37	404.56	619.17	931.32	1 378.58
15 .....	207.89	417.72	813.71	1 540.70	2 842.17	5 118.59
20 .....	265.33	672.75	1 636.65	3 833.76	8 673.62	19 004.96

**VALUE OF A \$1 NOTE EXPRESSED IN BASE YEAR DOLLAR VALUES (\$)**

1 .....	.95	.91	.87	.83	.80	.77
2 .....	.91	.83	.76	.69	.64	.59
3 .....	.86	.75	.66	.58	.51	.46
4 .....	.82	.68	.57	.48	.41	.35
5 .....	.78	.62	.50	.40	.33	.27
10 .....	.61	.39	.25	.16	.11	.07
15 .....	.48	.24	.12	.06	.04	.02
20 .....	.38	.15	.06	.03	.01	.01

**PERCENTAGE DECLINE IN VALUE OF A DOLLAR NOTE FROM BASE YEAR**

1 .....	4.8	9.1	13.0	16.7	20.0	23.1
2 .....	9.3	17.4	24.4	30.6	36.0	40.8
3 .....	13.6	24.9	34.2	42.1	48.8	54.5
4 .....	17.7	31.7	42.8	51.8	59.0	65.0
5 .....	21.6	37.9	50.3	59.8	67.2	73.1
10 .....	38.6	61.4	75.2	83.8	89.3	92.7
15 .....	51.9	76.1	87.7	93.5	96.5	98.0
20 .....	62.3	85.1	93.9	97.4	98.8	99.5

(a) These figures could also be regarded as price indexes to the base, year 0 = 100.00.

### Calculation of Price Index Series for Particular Purposes

Special purpose index series are often useful. For example, an index of average weekly earnings for Tasmania, base year 1974-75 = 100.0, may be useful in relation to the costs of a large construction program commenced in that year; an office rental rate may be adjusted regularly according to movements in the consumer price index from the date of commencement of the leasing agreement.

Calculation of a special purpose price index series based on unit values (or index numbers) available for a series of years is easily carried out as follows: Choose the base year and let the index number for that year equal 100.0; then the index number for any other year equals—

$$\frac{\text{value for that year}}{\text{value for the base year}} \times \frac{100.0}{1}$$

As examples, price index series with base year 1974-75 = 100.0, have been calculated from the following series: (i) average weekly earnings per employed male unit, Tasmania; and (ii) the consumer price index, all groups, for Hobart. The results are set out below:

Average Weekly Earnings Index and Consumer Price Index

Particulars	1974-75	1975-76	1976-77	1977-78	1978-79	1979-80
Average weekly earnings, Tasmania—						
Amount .....	\$ 140.20	157.80	181.20	199.00	211.60	237.90
Index of, base year 1974-75 = 100.0 .....	100.00	112.55	129.24	141.94	150.93	169.69
Percentage increase (a) .....	26.9	12.6	14.8	9.8	6.3	12.4
Consumer price index (b)—						
Base year 1966-67 = 100.0 .....	166.7	190.0	217.7	239.1	257.7	284.0
Base year 1974-75 = 100.0 .....	100.0	114.0	130.6	143.4	154.6	170.4
Percentage increase (a) .....	16.9	14.0	14.6	9.8	7.8	10.2

(a) Over preceding year.

(b) All groups, Hobart.

### Using a Price Index Series

If a *relevant* price index is available, a *current value* series may be readily adjusted to values at *constant prices* relative to any base year desired, in order to allow a more realistic assessment of trends over time.

For example, the year *n* value, at year *m* constant prices

$$= \frac{\text{current value for year } n}{1} \times \frac{\text{price index for year } m}{\text{price index for year } n}$$

If it was desired to convert a current value of \$100m in 1976-77 to constant 1974-75 values based on the Hobart all groups consumer price index (see the last table for index numbers), the calculations would be as follows:

$$\text{Value at 1974-75 prices} = \$100\text{m} \times \frac{166.7}{217.7}$$

$$= \$76.6\text{m}$$

$$\text{(Or, alternatively, } \$100\text{m} \times \frac{100.0}{130.6} = \$76.6\text{m)}$$

## WAGES

### The Basic Wage

#### General

The present position is as follows: wages fixed by Tasmanian State Industrial Boards still consist of two parts, namely a *basic wage* and a *margin*; wages fixed by the Federal Conciliation and Arbitration Commission are expressed as a *total wage*, the basic wage concept having been abolished in federal awards in 1967. All state industrial authorities with the exception of Victoria's have retained the basic wage concept. A more detailed history of the basic wage can be found in the 1970 *Year Book*.

#### State Basic Wage Rates

The following table shows the awards and determinations made by Tasmanian industrial authorities from 1975:

**Tasmanian Basic Wage Rates**  
(£)

Date of operation (a)	Adult males	Adult females	Date of operation (a)	Adult males	Adult females
1975 15 May .....	47·00	38·20	1977 22 August .....	71·30	71·30
1975 18 September .....	50·00	50·00	1977 12 December .....	72·40	72·40
1976 15 February .....	54·40	54·40	1978 28 February .....	73·50	73·50
1976 15 May .....	58·20	58·20	1978 7 June .....	74·50	74·50
1976 15 August .....	60·70	60·70	1978 12 December .....	77·50	77·50
1976 22 November .....	62·90	62·90	1979 27 June .....	80·00	80·00
1977 31 March .....	68·60	68·60	1980 4 January .....	83·60	83·60
1977 24 May .....	69·90	69·90	1980 14 July .....	87·10	87·10

(a) Rates operative from the first pay-period commencing on or after the date shown.

**Minimum Wages**

The Federal Conciliation and Arbitration Commission announced in its decision of 8 July 1966 that it intended to grant relief to low wage earners by inserting a provision prescribing a minimum wage. It ordered that the minimum male wage paid under the Metal Trades Award should be the appropriate basic wage plus \$3·75 a week (e.g. in Tasmania a basic wage of \$33·40 plus \$3·75 giving a minimum wage of \$37·15).

Tasmanian Industrial Boards introduced the concept of the minimum wage into their determinations in June 1967. Weekly minimum wage rates prescribed in federal and State awards for recent years are shown in the following table:

**Minimum Wages, Adult Males: Federal and State Awards**  
(£)

Date operative (a)	Federal awards	Tasmanian State Industrial Boards determinations
22 August 1977 .....	111·20	112·30
12 December 1977 .....	112·90	114·00
28 February 1978 .....	114·60	115·70
7 June 1978 .....	116·10	117·20
12 December 1978 .....	120·70	121·90
27 June 1979 .....	124·60	125·80
4 January 1980 .....	130·20	131·50
14 July 1980 .....	135·70	137·00

(a) Rates operative from the first pay-period commencing on or after the date shown.

**Total Wage Concept**

For a full account of events leading to the adoption of a 'total wage' concept see the 1970 *Year Book*. The decision abolishing the basic wage in awards of the Federal Conciliation and Arbitration Commission was handed down in June 1967 when a \$1·00 increase was awarded, to be added to the *total wage*. Results of recent national wage cases prior to the adoption of wage indexation principles in April 1975 follow:

- 1973** The total wage was increased by a combination of a two per cent increase plus a flat increase of \$2·50. The minimum wage was increased by \$9·00 per week.
- 1974** The Arbitration Commission again increased total award rates by a combination of a two per cent increase plus a flat rate increase of \$2·50. The minimum wage was increased by \$8·00 per week.
- 1975** Total wages were increased by 3·6 per cent in line with the movement of the Consumer Price Index during the March quarter 1975. The minimum wage was increased by \$8·00 per week, effective from 1 January 1975, and by a further \$4·00 when trial indexation was introduced.

**Total Wage concept in Tasmania**

The following table shows recent determinations made by the State Industrial Boards:

## Tasmania: State Industrial Boards Determinations

Date (a)	Basic wage		Minimum wage	
	Increase	Total	Increase	Total
	\$	\$	\$	\$
August 1977 .....	1.40	71.30	2.20	112.30
December 1977 .....	1.10	72.40	1.70	114.00
February 1978 .....	1.10	73.50	1.70	115.70
June 1978 .....	1.00	74.50	1.50	117.20
December 1978 .....	3.00	77.50	4.70	121.90
June 1979 .....	2.50	80.00	3.90	125.80
January 1980 .....	3.60	83.60	5.70	131.50
July 1980 .....	3.50	87.10	5.50	137.00

(a) Determination effective during this month.

The Federal award of June 1967 was followed by a test case argued before the Chairman of the State Industrial Boards. The employers asked for adoption of the total wage concept. The unions opposed this and argued for a \$7.30 increase in the basic wage; if a lesser amount was determined, then a *minimum total wage* of \$40.70 should nevertheless be fixed.

The decision in the test case (Electrical Trades) was that both male and female rates should be increased by \$1; the increase, however, should be regarded as *raising the basic wage* which would be retained for the present in State determinations. The State Industrial Boards have retained the basic wage and margins concepts in awards handed down following subsequent national wage case determinations of the Federal Conciliation and Arbitration Commission.

## National Wage Case Decisions

The Conciliation and Arbitration Commission began hearing submissions regarding wage indexation subsequent to the publication of the June quarter 1975 Consumer Price Index. Submissions were made by the Federal Government, state governments, tribunals, private employers and trade unions. The Commission also sat to consider whether subsequent increases should be awarded, in line with the principles of wage indexation, following publication of the Consumer Price Index for each quarter.

The following table shows the increases made by the Conciliation and Arbitration Commission in National Wage Case decisions from August 1976:

## General Increases in award Total Wages: National Wage Cases Decisions

Date operative (a)	Increase
1976—15 August .....	1.5 per cent (b)
22 November .....	2.2 per cent
1977—31 March .....	\$5.70 per week
24 May .....	1.9 per cent (c)
22 August .....	2.0 per cent
12 December .....	1.5 per cent
1978—28 February .....	1.5 per cent (d)
7 June .....	1.3 per cent
12 December .....	4.0 per cent
1979—27 June .....	3.2 per cent
1980—4 January .....	4.5 per cent
14 July .....	4.2 per cent

(a) Operative from the beginning of the first pay-period commencing on or after the date shown.

(b) \$2.50 for wage rates up to \$166 per week. 1.5 per cent for wage rates over \$166 per week.

(c) Increase of 1.9 per cent up to a maximum of \$3.80 per week.

(d) Increase of 1.5 per cent up to a maximum of \$2.60 per week.

## Wage Fixation Principles

### Introduction

In April 1975, the Federal Conciliation and Arbitration Commission adopted the principle of wage indexation based upon quarterly movements in the Consumer Price Index. At that time the Commission established certain principles in relation to its quarterly indexation decisions. Over the first three years that indexation cases operated, the Commission expressed concern about the viability and future of the system. In its National Wage Decision of May 1977, the Commission commented on problems relating to principles of wage fixation. The Commission also announced that a conference would be called on 25 May 1977 to discuss these problems. The conference, held in private, was conducted between 25 May 1977 and 31 April 1978. The purpose of the conference was to achieve consensus in as many areas of wage fixation as possible. The organisations represented at the conference were: The Australian Council of Trade Unions; The Council of Australian Government Employee Organisations; The Australian Council of Salaried and Professional Associations; The Australian Public Service Federation; National Employers' Policy Committee; The Master Builders' Federation of Australia; the Commonwealth Government; each State Government; and the Australian Public Service Board. The conference and its report formed the basis for the decision on wage fixation principles handed down by the President of the Commission, Sir John Moore, on 14 September 1978. (A more detailed statement of these principles can be found in the 1979 *Year Book*.)

In announcing the principles, Sir John emphasised that a prime consideration in making future awards would be whether there had been substantial compliance with the principles. The Commission also decided that the principles should continue to operate until 31 December 1979. This period was subsequently extended as The Commission noted there had been substantial compliance, and that identifiable non-wage factors appeared to have dominated price increases. A further review of the principles by way of a conference of all parties was planned for early 1981.

## Weekly Wage Rates

### Definitions

In this section, 'weekly wage rates' is used as a short title for '*weighted average minimum weekly wage rates*'. The rates are those applicable to adult males and adult females, and are those fixed in awards.

The minimum wage is the lowest rate payable for a particular occupation. This minimum rate may be expressed as: (i) a total wage (e.g. in awards of the Federal Conciliation and Arbitration Commission); (ii) a basic wage plus secondary wage payments, i.e. additional amounts for skills, loadings, etc. (e.g. in awards of state wage-fixing authorities except Victoria); or (iii) in agreements registered with federal or state wage-fixing authorities. The introduction of varying federal and state practices relating to 'total' and 'basic' wages from time to time has not affected the continuity of the statistical series.

**Weighting:** To arrive at a weighted average rate for a particular field (e.g. a rate for occupations in Tasmania covered by federal awards) certain data are required. The basic initial information is the award rate applying to each occupation and its relative significance (broadly, the numbers in each occupation). The calculation of average minimum rates is based on the occupational structure existing in 1954.

The individual minimum wage rates, combined to give the averages shown in the tables, are those for representative occupations within each industry. Since the aim is to measure movements in prescribed minimum rates of 'wages' as distinct from 'salaries', those awards, etc., which relate solely or mainly to salary-earners are excluded. Weighted averages of the components of the total minimum weekly wage rate (i.e. basic wage, margin and loading) are calculated separately for adult male employees covered by federal awards, etc., and for those covered by state awards, etc.

**'Federal Awards, etc.':** These include awards of, or agreements registered with, the Federal Conciliation and Arbitration Commission, and determinations of the Federal Government Public Service Arbitrator.

'State Awards, etc.': These include awards or determinations of, or agreements registered with, state industrial tribunals, together with certain unregistered agreements, where these are dominant in the particular industries to which they refer. (In Tasmania the principal tribunals are the State Industrial Boards.)

'Basic Wage Rates': These are weighted averages of the weekly rates prescribed in awards, etc., for the occupations included in the calculation. For industries other than mining, metropolitan basic wage rates have generally been used. However, there are a number of occupations for which basic wage rates other than the metropolitan rate are prescribed. In all such cases, the basic wage rate actually paid is used in the tables. As a result, the weighted average basic wage shown in this section differs from the Hobart basic wage appearing elsewhere.

'Margins': These are minimum amounts, in addition to the basic wage awarded to particular classifications of employees for special features such as skill, experience, arduousness or other like factors.

'Loadings': These include industry loadings and other general loadings prescribed in awards, etc., for the occupations included in the calculation. Loadings that are not applicable to all workers in a specified award occupation (for example, those payable because of length of service; working in wet, dirty or confined spaces, etc.) are not included in the calculation.

### Male and Female Rates

**Limitation:** The wage rates shown in the tables in this section should not be regarded as actual current averages, but rather as indexes expressed in money terms, indicative of trends. The wage rates do not measure the relative level of minimum wages as between states.

Minimum weekly wage rates for adult males are not comparable with 'average weekly earnings per employed male unit' appearing in a later section of this chapter; the latter includes not only the earnings of adult wage-earners but also those of salaried employees, junior wage-earners and part-time and casual employees; included also are over-award payments and overtime earnings.

Tasmanian details by industry group are given in the next table:

**Weighted Average Minimum Weekly Wage Rates and Index Numbers, Tasmania**  
**Adult Males and Adult Females: Industry Groups, 31 December 1979 (a)**

Industry group	Adult males		Adult females	
	Rates of wage (\$)	Index numbers (b)	Rates of wage (\$)	Index numbers (b)
Mining and quarrying .....	171.84	608.5	—	—
Manufacturing—				
Engineering, metals, vehicles, etc. ....	162.99	577.1	153.54	771.2
Textiles, clothing and footwear .....	146.53	518.8	141.30	709.8
Food, drink and tobacco .....	160.70	569.0	148.23	744.6
Sawmilling, furniture, etc. ....	149.30	528.6	131.43	660.2
Paper, printing, etc. ....	160.62	568.7	148.30	744.9
Other manufacturing .....	155.87	551.9	—	—
All manufacturing groups .....	158.40	560.9	145.20	729.4
Building and construction .....	170.34	603.2	—	—
Railway services .....	166.80	590.6	161.50	811.2
Road and air transport .....	164.29	581.7	—	—
Shipping and stevedoring .....	197.47	699.2	—	—
Communication .....	192.54	681.7	158.86	798.0
Wholesale and retail trade .....	168.82	597.8	153.72	772.2
Public authority (n.e.i.) and community and business services .....	179.71	636.3	158.61	796.7
Amusement, hotels, personal service, etc. ....	147.61	522.6	143.48	720.7
All industry groups .....	166.84	590.8	149.53	751.1

(a) These figures are subject to revision.

(b) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.



The following table summarises minimum weekly wage rates for adult males and adult females in Tasmania for recent years. The averages include Federal and State awards, etc., and are for all industry groups combined.

**Weighted Average Minimum Weekly Wage Rates, Tasmania (a)**  
**Adult Males and Adult Females: All Groups**  
 (\$)

End of December—	Adult rate		End of December—	Adult rate	
	Male	Female		Male	Female
1974.....	106.02	92.47	1977.....	147.58	134.91
1975.....	117.27	105.56	1978.....	r 159.23	r 144.66
1976.....	134.14	122.15	1979 p.....	166.84	149.53

(a) Weighted average minimum weekly rates payable for a full week's work (excluding overtime) as prescribed in awards, determinations, etc.

### Index Numbers

The following table shows, in summary form, the index numbers for adult male and adult female weighted average minimum weekly wage rates in Tasmania for recent years:

**Weighted Average Minimum Weekly Wage Rates, Tasmania: Index Numbers, All Groups**  
**Adult Males and Adult Females**

End of December—	Index numbers (a)		End of—	Index numbers (a) (b)	
	Male	Female		Male	Female
1974.....	375.4	464.5	March 1979.....	565.2	727.3
1975.....	415.2	530.2	June 1979.....	585.7	750.6
1976.....	475.0	613.6	September 1979.....	587.4	750.6
1977.....	522.6	677.7	December 1979.....	590.8	751.1
1978.....	r 563.8	r 726.6	March 1980.....	620.3	785.4
1979 p.....	590.8	751.1	June 1980.....	620.9	787.4

(a) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.

(b) Figures after March 1979 are subject to revision.

### Australian Rates

In the next table, rates and index numbers are shown for each Australian state:

**Weighted Average Minimum Weekly Wage Rates, Australia (a): All Groups, Adult Males**

End of December—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Australia
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#### RATES OF WAGES (\$)

1974.....	105.97	105.15	108.95	103.32	101.02	<b>106.02</b>	105.57
1975.....	118.70	117.32	121.48	115.13	113.32	<b>117.27</b>	117.95
1976.....	136.14	134.10	139.14	132.20	132.29	<b>134.14</b>	135.29
1977.....	149.93	147.50	152.76	145.69	148.55	<b>147.58</b>	149.08
1978 r.....	161.99	159.68	164.05	158.53	158.19	<b>159.23</b>	160.96
1979 p.....	169.79	167.61	170.09	167.08	164.51	<b>166.84</b>	168.52

#### INDEX NUMBERS (b)

1974.....	375.2	372.3	385.8	365.8	357.7	<b>375.4</b>	373.8
1975.....	420.3	415.4	430.1	407.6	401.2	<b>415.2</b>	417.6
1976.....	482.0	474.8	492.7	468.1	468.4	<b>475.0</b>	479.0
1977.....	530.9	522.3	540.9	515.9	526.0	<b>522.6</b>	527.9
1978 r.....	573.6	565.4	580.9	561.3	560.1	<b>563.8</b>	569.9
1979 p.....	601.2	593.5	602.3	591.6	582.5	<b>590.8</b>	596.7

(a) For a full week's work (excluding overtime), as prescribed in awards, determinations, etc.

(b) Base of index numbers: weighted average minimum weekly wage rate, Australia, 1954 = 100.0.

## Hourly Wage Rates in Tasmania

## General

Hourly wage rates is the short title for 'Weighted average minimum hourly rates payable'. The concept is completely analogous to that embodied in weighted average minimum weekly wage rates and the calculation is similarly based on rates prescribed in awards or determinations of federal and state industrial authorities or in agreements registered with them.

## Definitions

**Hours of Work:** In the fixing of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages of hourly rates.

Rural industry is excluded from the calculation of weighted average minimum weekly wage rates and also from the calculation of weighted average minimum hourly wage rates. In addition, the shipping and stevedoring group is also excluded from the latter calculation since definite particulars for the computation of hourly wage rates are not available.

The 40-hour week has operated in Australia generally from 1 January 1948 (N.S.W., from 1 July 1947). Nevertheless, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or states. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and agreements for a full working week, in respect of adult male workers in all industry groups except rural, and shipping and stevedoring, at 30 June 1980, were: N.S.W., 39.68; Victoria, 39.90; Queensland, 39.82; S.A., 39.90; W.A., 39.78; Tasmania, 39.87; Australia, 39.80. Corresponding figures for adult female workers at 30 June 1980 were: N.S.W., 39.53; Victoria, 39.81; Queensland, 39.70; S.A., 39.77; W.A., 39.78; Tasmania, 39.63; Australia, 39.67.

**Weekly Wage Rate Definitions:** Apart from exclusion of the shipping and stevedoring industry, the definitions in the section headed 'weekly wage rates' apply with equal force to the calculation of hourly wage rates.

## Summary of Details

The following table shows, for Tasmania, weighted average minimum hourly wage rates for adult male and adult female workers in all industries (except rural, and shipping and stevedoring) for recent years:

Weighted Average Minimum Hourly Wage Rates, Tasmania, All Groups  
Adult Males and Adult Females

End of—	Rates of wage (\$)		Index numbers (a)	
	Males (b)	Females (c)	Males (b)	Females (c)
December—1974 .....	2.6396	2.3336	373.1	465.1
1975 .....	2.8989	2.6639	409.7	531.0
1976 .....	3.3176	3.0827	468.9	614.4
1977 .....	3.6547	3.4046	516.6	678.6
1978 .....	3.9458	3.6507	557.7	727.7
1979 p .....	4.1381	3.7736	584.9	752.2

(a) Base of index numbers: weighted average hourly wage rate, Australia, 1954 = 100.0.

(b) All industry groups except rural, and shipping and stevedoring.

(c) All industry groups except rural, mining and quarrying, and building and construction.

## Average Weekly Earnings

## Source of Data

The figures in the following section are derived from particulars of employment and of wages and salaries recorded on pay-roll tax returns, from other direct collections and from estimates of the unrecorded balance. (In general, businesses with pay-rolls of less than \$5 000

per month are exempt from pay-roll tax and do not need to supply monthly details of employment and of wages and salaries.) Pay of members of the defence forces is not included.

### Definitions

**'Employed Male Unit':** This is a special unit devised to overcome the difficulty that particulars of wages and salaries are not available separately for males and females. (The basic data available are the number of males, the number of females and the total pay-roll, only.) The number of females is converted to a *lesser equivalent number* of males by taking into account the approximate ratio of female to male earnings; a divisor for deriving average 'male' earnings is then obtained by adding the actual number of males to the calculated number of 'male equivalents'. The divisor so obtained is called 'employed male units'.

Separate ratios of female to male average earnings are used for individual states based on information from regular surveys of weekly earnings and hours and other sources. The Australian ratio is the weighted average of the State and Territory ratios. (The ratio for Tasmania for the June quarter 1980 was 65 per cent and for Australia 66.5 per cent.)

**Components of Pay-roll:** Pay-roll includes, in addition to wages at award rates, the earnings of salaried employees, overtime earnings, over-award and bonus payments, allowances, commissions, directors' fees, and payments made in advance or retrospectively (e.g. advances of annual leave pay). Included also are the wages and salaries, not only of adults, but also of juniors; the earnings may relate to full-time, part-time or casual workers.

**Invalid Comparison:** Average earnings per employed male unit cannot be compared with male weighted average minimum weekly wage rates shown in the previous section. Weighted average minimum weekly wage rates relate to award rates for adult male wage earners in non-rural industry for a full week's work, at the end of each month or year; the average weekly earnings per employed male unit are derived from the pay-roll concept outlined in the previous paragraph and obviously cover a wider field of earnings and of wage and salary earners.

**Seasonal Influence:** Quarterly figures are affected by seasonal influences. For example, special payments, including prepayment for holiday periods, tend to raise the December quarter and to depress the March quarter averages. Comparisons as to trends are generally best made by relating complete years or corresponding periods of incomplete years. Alternatively, a 'seasonally adjusted' series may be used. Seasonally adjusted estimates (i.e. original data subjected to seasonal adjustment factors to remove the sudden influence of major changes in awards and determinations and of the effects of pay-day variations) are shown in the graph which follows the tables below.

### Summary of Details

The following tables show, for Tasmania and Australia, average weekly earnings per employed male unit:

Average Weekly Earnings Per Employed Male Unit, Tasmania (a)

Year	Average for quarter ending— (\$)				Average for year	
	September	December	March	June	Amount (\$)	Percentage change (b)
1974-75 .....	127.30	146.70	135.30	151.40	140.20	26.9
1975-76 .....	150.30	164.70	151.20	165.10	157.80	12.6
1976-77 .....	175.60	188.70	175.10	185.50	181.20	14.8
1977-78 .....	195.90	204.80	194.00	201.10	199.00	9.8
1978-79 .....	205.50	214.50	208.50	217.80	211.60	6.3
1979-80 .....	229.30	239.70	235.40	247.30	237.90	12.4

(a) For definitions, see earlier section headed 'Definitions'.

(b) Over preceding year.

**Average Weekly Earnings Per Employed Male Unit, Australia (a)**  
( $\text{\$}$ )

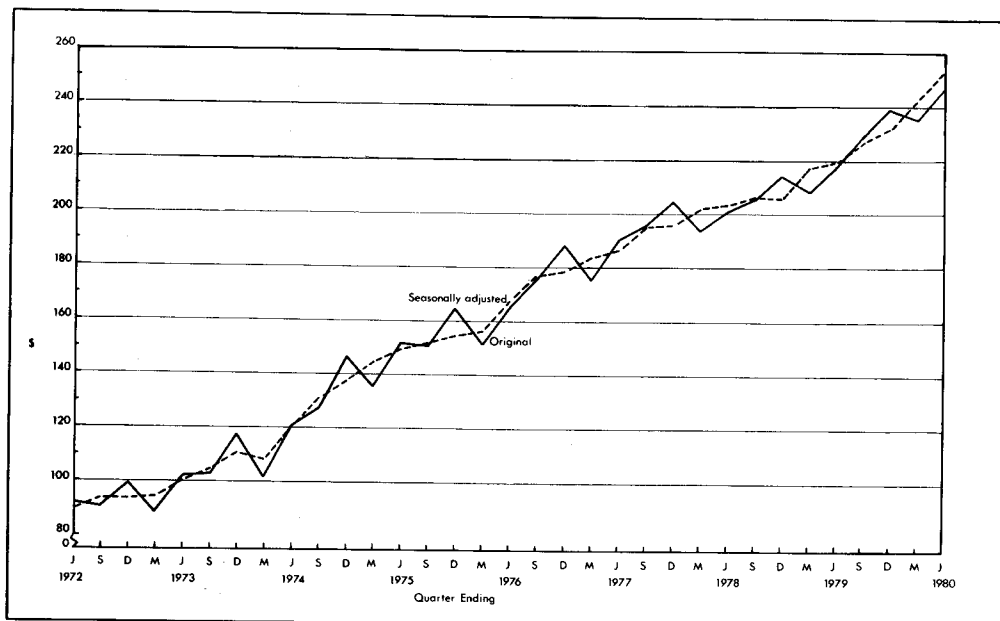
Period	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
1974-75 .....	152.10	147.80	142.50	138.60	145.60	<b>140.20</b>	168.50	184.30	148.30
1975-76 .....	172.70	170.50	163.50	158.50	169.10	<b>157.80</b>	190.00	209.00	169.60
1976-77 .....	193.60	191.10	184.50	179.50	190.80	<b>181.20</b>	216.70	237.10	190.70
1977-78 .....	213.40	209.30	202.20	197.40	209.20	<b>199.00</b>	240.70	259.10	209.50
1978-79 .....	230.20	226.60	217.80	210.30	223.30	<b>211.60</b>	259.30	279.50	225.70
1979-80 .....	253.10	248.30	234.00	230.50	244.30	<b>237.90</b>	289.20	305.60	247.10

PERCENTAGE CHANGE: 1979-80 OVER 1978-79

	+9.9	+9.6	+7.4	+9.6	+9.4	<b>+12.4</b>	+11.5	+9.3	+9.5
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(a) For definitions, see the section preceding the tables.

**Average Weekly Earnings Per Employed Male Unit**  
**Quarterly Averages, Tasmania**



### Surveys of Weekly Earnings and Hours

#### General

Sample surveys in respect of most employers in the private sector subject to pay-roll tax have been conducted annually during recent years by the Bureau as at a specified pay-period in October. In 1972, for the first time, government employees were included in the survey. The results of the surveys are based on returns from stratified random samples of private employers subject to pay-roll tax; non-government hospitals not subject to pay-roll tax; local government authorities; and for all federal and state government departments, authorities and semi-government bodies.

For Australia as a whole the 1979 Survey covered approximately 2 718 000 male and 1 473 000 female wage and salary earners, comprising 1 741 000 males and 948 000 females in private employment, and 977 000 males and 525 000 females in government employment.

### Definitions

**Weekly Earnings:** Gross earnings before taxation and other deductions have been made; includes: overtime earnings, ordinary time earnings, shift allowances, penalty rates, commission and similar payments; and that part of paid annual leave, paid sick leave, long service leave and paid holidays taken during the specified pay-period. It includes one week's proportion of payments made other than on a weekly basis, e.g. salary paid fortnightly or monthly. Retrospective payments are excluded.

**Juniors:** Those under 21 years of age not paid adult rates (but 'adults' may include those under 21 years receiving adult rates).

**Full-time Employees:** Employees who ordinarily work 30 hours or more a week and who received pay for a specified pay-period in October.

### Results of Surveys

The following table dissects average weekly earnings and hours by overtime earnings and hours for the private and total (private and government) sectors in Tasmania:

**Average Earnings and Hours, Tasmania: Private and Total (Private and Government) Employment (a)**  
**October 1979**

Particulars	Private employment	Private and government	Private	Private and government
<b>AVERAGE WEEKLY OVERTIME AND WEEKLY TOTAL EARNINGS (\$)</b>				
	Average weekly overtime earnings		Average weekly total earnings	
Adult males—				
Manufacturing .....	19.90	19.60	232.00	231.40
Non-manufacturing (b) .....	15.50	12.20	234.80	238.80
All industries (b) .....	17.50	14.40	233.50	236.70
Junior males, all industries (b) .....	5.90	4.90	128.70	129.80
Females, all industries (b)—				
Adult .....	2.30	1.90	176.00	200.00
Junior .....	2.10	1.70	108.40	119.50
<b>AVERAGE WEEKLY OVERTIME HOURS AND WEEKLY TOTAL HOURS PAID FOR</b>				
	Average weekly overtime hours paid for		Average weekly total hours paid for	
Adult males—				
Manufacturing .....	2.3	2.3	41.3	41.3
Non-manufacturing (b) .....	1.8	1.3	40.8	39.8
All industries (b) .....	2.0	1.6	41.0	40.2
Junior males, all industries (b) .....	1.1	0.9	40.1	39.7
Females, all industries (b)—				
Adult .....	0.3	0.2	38.9	38.0
Junior .....	0.5	0.4	39.5	39.1
<b>AVERAGE HOURLY OVERTIME AND HOURLY EARNINGS (\$)</b>				
	Average hourly overtime earnings		Average hourly earnings (c)	
Adult males—				
Manufacturing .....	8.65	8.52	5.62	5.60
Non-manufacturing (b) .....	8.61	9.38	5.75	6.00
All industries (b) .....	8.75	9.00	5.70	5.89
Junior males, all industries (b) .....	5.36	5.44	3.21	3.27
Females, all industries (b)—				
Adult .....	7.67	9.50	4.52	5.26
Junior .....	4.20	4.25	2.74	3.06

(a) Average for all employees represented in the survey but excluding managerial, executive, professional and higher supervisory staff. Full-time employees included only. For the pay-period including 15 October.

(b) Excludes rural industry and private domestic service.

(c) Derived by dividing average weekly total earnings by average weekly total hours paid for.

## Minimum Wage Rates, Selected Occupations, Hobart

The following table shows minimum wage rates for selected occupations as prescribed by Federal and State awards, agreements and various determinations (both registered and unregistered) operative at 31 December in recent years. Unless specified, rates shown in the following table are for a 40-hour week. Increases reflect various margin adjustments.

## Selected Minimum Wage Rates, Adult Males and Females: Hobart (\$)

Industry and occupation	31 December		At 30 June
	1977	1978	1979
ADULT MALES			
Primary production—			
Farming (general), general hand	(a) 125-60	134-40	138-70
Grazing, shearers (per 100 flock sheep) (b)	57-70	61-48	68-13
Mining and quarrying—			
Coal mining, miner (machine) (c)	r 179-80	r 192-20	198-40
Quarrying, labourer	134-50	143-90	148-50
Engineering, metals, vehicles, etc.—			
Engineering—Fitter or turner	144-00	164-40	179-00
Toolmaker	151-00	175-00	189-90
Textiles, clothing and footwear—			
Clothing trades (readymade), tailor	139-60	149-50	154-00
Footwear, maker	128-30	137-20	141-60
Textiles—Knitting, knitter	129-10	138-00	142-40
Woollen, weaver	124-70	133-40	137-70
Food, drink and tobacco—			
Aerated waters and cordials, general hand	r 114-00	r 121-90	125-80
Bacon curing, boner	170-70	182-60	188-50
Bread baking, doughmaker	174-30	186-40	192-40
Brewing, general hand	r 158-30	r 169-30	174-70
Butter, cheese and milk processing, butter maker	143-70	153-70	158-60
Confectionery, confectioner (group 1)	151-30	161-80	167-00
Jam, fruit and vegetable preserving, general hand	133-20	142-50	147-10
Meat industry—Labourer (beef, mutton)	r 137-40	147-10	151-80
Slaughterman (mutton)	180-10	192-50	198-70
Sawmilling, furniture, etc.—			
Sawmilling and timber yards—Machinist (A grade)	149-20	159-50	164-60
Sawyer (circular)	132-20	141-30	145-80
Paper, printing, etc.—			
Printing (general)—Bookbinder	150-10	160-60	170-90
Machine compositor	157-10	168-10	183-80
Printing (newspapers)—Machine compositor (day work)	196-60	210-00	216-70
Machine compositor (night work) (d)	229-90	245-60	253-50
Other manufacturing—			
Brickmaking, drawer	142-90	152-80	157-70
Electricity generation and supply, electrical fitter	148-90	158-90	174-90
Building and construction—			
Building (e)—Bricklayer	r 195-20	r 203-20	209-60
Builder's labourer, skilled	175-40	r 187-20	194-00
Builder's labourer, unskilled	163-40	r 174-40	180-80
Carpenter	r 196-40	r 203-60	211-20
Electrician (installation) (f)	170-00	182-00	187-60
Plasterer	r 195-60	r 202-80	210-40
Painter	r 193-20	r 200-00	207-60
Plumber	177-00	190-60	196-20
Railway services—			
Traffic—Locomotive engine driver	163-95	r 192-70	208-20
Porter	124-05	r 148-50	153-30
Road and air transport—			
Road transport, motor truck driver (over 1-2 tonnes to 3-0 tonnes)	145-30	163-40	168-60
Tramways and buses, bus driver (one-man operator) (g)	148-30	159-60	164-70
Shipping and stevedoring—			
Shipping (cargo vessels), able seaman (h)	275-71	294-85	319-50
Stevedoring, wharf labourer (per hour) (i)	5-56	6-19	6-39

**Selected Minimum Wage Rates, Adult Males and Females: Hobart—continued**  
(\\$)

Industry and occupation	31 December		At 30 June 1979
	1977	1978	
ADULT MALES—continued			
Communication—			
Post Office, postman (j) . . . . .	r 160-10	r 166-50	171-83
Wholesale and retail trade—			
Butchers, general butcher . . . . .	162-50	173-90	179-50
Petrol service stations, attendant . . . . .	123-80	r 132-00	136-20
Retail stores, shop assistant (grocery) . . . . .	118-50	126-80	130-90
Wool stores, wool classer . . . . .	r 124-40	166-20	171-50
Public authority (n.e.c.), community and business services—			
Hospitals, orderly . . . . .	r 148-80	158-98	164-09
Other services—Graduate engineer . . . . .	r 185-23	198-00	204-33
Graduate scientist . . . . .	r 172-00	184-00	189-90
Amusement, hotels, personal services, etc.—			
Hairdressing, hairdresser (men's) . . . . .	155-20	166-00	171-30
Hotels (k), barman . . . . .	133-90	143-70	148-30
Restaurants (l), cook (one cook only employed) . . . . .	134-60	144-00	148-60
Watchmen, cleaners, etc., office cleaner (day) . . . . .	139-80	149-60	154-40
ADULT FEMALES			
Textiles, clothing and footwear—			
Dry cleaning, presser . . . . .	135-40	144-80	149-40
Order dressmaking, machinist . . . . .	130-90	140-00	144-50
Readymade dressmaking, table hand or coat machinist . . . . .	r 129-20	140-00	144-50
Textiles—Knitting, machinist . . . . .	129-10	138-00	142-40
Woollen, weaver . . . . .	128-80	137-70	142-10
Food, drink and tobacco—			
Confectionery, general hand . . . . .	r 125-50	138-10	142-50
Jam, fruit and vegetable preserving, general hand . . . . .	133-20	142-50	147-10
Transport and communication—			
Post Office, telephonist (l) . . . . .	141-64	151-48	156-21
Wholesale and retail trade—			
Retail stores—Shop assistant (confectionery) . . . . .	118-50	126-80	130-90
Shop assistant (drapery) . . . . .	118-50	126-80	130-90
Public administration and community and business services—			
Australian Public Service, typist (j) . . . . .	142-95	152-86	157-74
Hospital nurses (qualified), first year . . . . .	166-60	178-20	183-90
Amusement, hotels, personal service, etc.—			
Cleaners, office cleaner (day) . . . . .	139-80	149-60	154-40
Hairdressing, hairdresser . . . . .	155-20	166-00	171-30
Hotels (k), barmaid . . . . .	132-40	143-70	148-30
Restaurants (k), waitress . . . . .	128-60	137-50	141-90
Theatres, usherette, ticket-taker, etc. (l) . . . . .	127-70	136-60	141-00

(a) 44-hour week. (b) Rates shown are 'not found rates'. Shearers' hours of work are 40 per week. (c) 35-hour week. In addition to the rate shown, an attendance allowance is payable for each full fortnightly pay-period worked. (d) 38-hour week. (e) Rates shown are weekly equivalents of hourly rates. They include allowances for excess fares, travelling time, sick leave, statutory holidays following the job, etc. (f) Weekly rates prescribed for a full week's work (excluding overtime). (g) Government operated services only. (h) Includes an allowance valued at \$8.15 per week for keep and accommodation. (i) Rates shown are for casual wharf labourers on other than special cargo work. (j) 36½-hour week. (k) Weekly cash payments where board and lodging are not provided. (l) 36-hour week.

### WAGE-FIXING AUTHORITIES Tasmanian Industrial Boards

#### History

The evolution of the Tasmanian Wages Boards system is described in the 1968 *Year Book*. On 22 December 1975, Royal Assent was given to the *Industrial Relations Act 1975*. The new Act superseded the *Wages Board Act 1920*, replacing Wages Boards with Industrial Boards; the more important changes embodied in it are outlined in the 1977 *Year Book*. The following sections summarise the current situation.

### *Tasmanian Industrial Boards*

The Tasmanian Industrial Boards are the wage-fixing Authorities for all employers whose employees are not covered by Federal or Public Service Board awards (approximately 70 000 employees in this State). The Chairman and Deputy Chairman of Industrial Boards are Government-appointed and act as Chairmen on approximately 70 Tasmanian Industrial Boards. Supporting staff are officers of the Department of Labour and Industry.

### *Establishment and Constitution of Industrial Boards*

Boards are established, by order of the Governor, for particular industries. The constitutional nexus of a Board is the industry of the employer, not the common occupation of the employees, as is the case under other authorities.

Each Board, of which there are about 70 in active existence, consists of an equal number of employer and employee representatives, and a Chairman. The Chairman is the Chairman of Industrial Boards, or at his direction, the Deputy Chairman of Industrial Boards. Board members are appointed by the responsible Minister; at least one-half (on either side) of the representatives must be employed in the industry within the Board's jurisdiction.

Board members are appointed to a three-year term of office.

### *Function of Boards*

The function of Industrial Boards is to make awards prescribing minimum wage rates and conditions of employment that must be observed by all employers in the industries within the particular Board's jurisdiction. (An 'Industry' is defined in the Act as any trade, business, undertaking, profession, calling, function, process or work performed, carried on, or engaged in by an employer.) Examples are the Mining (Lead-Zinc) Industrial Board, which is established in respect of the industry of mining and processing of silver-lead-zinc ore; the Dentists' Industrial Board, established in respect of dentists and dental mechanics, and hence covering persons employed in those industries, and the Shipbuilders' Industrial Board, established in respect of the industry of constructing, altering, or repairing ships or boats, and dunnaging of ships' holds.

An award cannot contain any matter relating to: (i) the opening or closing hours of an employer's business premises; (ii) the granting of long service leave; (iii) a bonus payment made at the discretion of an employer; or (iv) a superannuation scheme.

Awards may be made to have retrospective effect, and may be made to remain in force for a specified period. Awards may replace, rescind or amend an existing award, and are subject to the *Apprentices Act 1942*, the *Long Service Leave Act 1956*, the *Public Health Act 1962*, the *Mines Inspection Act 1968* and the *Industrial Safety, Health and Welfare Act 1977*.

Meetings of Boards are normally convened by the Chairman of Industrial Boards but the responsible Minister (The Minister for Industrial Relations) may convene a Board meeting for the purpose of settling or preventing an industrial dispute.

### *Variations to Awards Without a Meeting of a Board*

Under section 30 of the Act, the Chairman may make an award amending a previous award, without the convening of a meeting of the Board, upon written application from all representative members of the Board for the particular amendment.

Under section 31 the Chairman can make a Common Rule Award, where the provisions of at least five awards are affected.

On receipt of an application, a notice is published in the daily press. A hearing is then conducted, at which the submissions of employer and employee organisations are considered by the Chairman. Following the hearing, the Chairman may make a Common Rule Award.

This award may only relate to the following matters: (i) a basic wage; (ii) a minimum wage; (iii) standard hours of work; (iv) paid leave of absence; and (v) any matter that is determined in an award made under the *Federal Conciliation and Arbitration Act 1904* that affects or relates to industries in which at least five Boards have jurisdiction. However, this restriction is removed if the award is made on joint application from the Tasmanian Trades and Labor Council and an appropriate employer organisation (usually the Tasmanian Chamber of Industries).

One example of a Common Rule Award is an award made following a 'National Wage' decision of the Federal Conciliation and Arbitration Commission.



### *Industrial Agreements*

Under section 32 of the Act, an industrial agreement may be made, for the purpose of resolving an industrial matter that does not extend to the whole of an industry within the jurisdiction of a Board. When the Chairman satisfies himself that the agreement has been executed by, or on behalf of, all parties involved in the matter, and that the provisions of the agreement are in line with appropriate award provisions, the Chairman 'shall certify that agreement as an award having like effect under this Act'.

### *Industrial Appeals Tribunal*

This Tribunal was set up to provide for appeals against a determination made by a Board or the Chairman to include, or refuse to include, any specified provision in an award or to refuse to make an award on any specified matter. Such appeals must be made within 21 days of the making of a determination. After hearing the appeal, the Tribunal (unless it dismisses the appeal) may reverse or vary the determination in respect of which the appeal is brought; and to give effect to its decision the Tribunal may vary or revoke an award, or make a new award.

A decision of the Tribunal can be challenged only on the grounds of illegality, by application to the Supreme Court.

### *Compulsory Conferences*

Under section 50 of the Act, the Minister may call a compulsory conference for the purpose of settling or preventing an industrial dispute.

The Minister may summons any person whose presence may help prevent or settle a dispute.

The compulsory conference is presided over by a person directed by the Minister to undertake such duty; in practice this person is usually the Chairman or Deputy Chairman of Industrial Boards.

If after considering the views expressed at the conference the President is of the opinion that certain action should be taken to effect the aim of the conference (viz. to settle or prevent an industrial dispute) then he may, by written order, direct such action to be taken.

## **Tasmanian Public Service Board**

### *General*

The *Public Service Act* 1973 established two new industrial authorities, the Public Service Board and Public Service Arbitrator (for details see the next section) to deal with awards, working conditions, etc., for employees of the State Government and certain State authorities. The Public Service Board comprises three Commissioners appointed by the Governor for terms not exceeding five years. One of the three Commissioners is appointed Chairman of the Board. In addition to members of the State Public Service the Board's jurisdiction includes persons employed in the teaching service, police force, parliamentary staff positions, public hospitals, non-academic staff of the College of Advanced Education and various State authorities.

The Public Service Board Department is the personnel authority for the Public Service and is required to examine the business of each department's activities and business methods to find ways of economising and promoting efficiency in the management and working of departments. The work of the Public Service Board Department, therefore, involves inspections and the recruitment, appointment, salary classification, training and promotion and disciplinary supervision of all persons employed under the *Public Service Act* 1973.

### *Industrial Functions*

The Public Service Board may make awards covering wages, salaries and conditions of work for employees falling within its jurisdiction. A main function of the Board is determining 'principal awards', i.e. an award which covers all employees within the scope of a particular group such as administrative and clerical officers. The determining of a principal award involves a complete review of the wages and salaries and other work conditions of all positions within the scope of the particular award.

Unless revoked a principal award is effective for three years. However, during the currency of a principal award it may be amended by the Board to eliminate anomalies, errors

or defects contained in it, to incorporate determinations of the Federal Conciliation and Arbitration Commission (e.g. national wage case decisions, etc.), or for a number of other reasons.

### The Tasmanian Public Service Arbitrator

The Public Service Arbitrator, appointed by the Governor for a term not exceeding five years, has the same area of jurisdiction as the Public Service Board. Applications to the Arbitrator for arbitration on awards may be made where the Public Service Board has: (i) refused an application for an award; (ii) made an award (including an award to supplement a consent award); or (iii) allowed three months or longer to elapse after an application has been made for an award without (a) refusing the application or (b) making an award (including a consent award). Such applications are lodged with the registrar and the Arbitrator, after he has been satisfied that the applicant is entitled to apply for arbitration, arranges to hear the applicant and others affected by the award. After hearing and considering an application the Arbitrator may: (i) refuse the application; (ii) confirm the award or any of its provisions; (iii) direct the Board to vary the award by omitting, altering or adding to the award's provisions; or (iv) where it has refused or failed to make an award, to make an award in specified terms.

The Public Service Arbitrator has an additional function of reviewing individual salary classifications made by any controlling authority following the handing down of any new principal award. Applications for consideration of particular salary classifications may be made by any registered employee organisation in respect of any office or position held by any of its members. In addition, the *State Employees (Long Service Leave) Act 1950* was amended on 19 September 1974. A new section provided for the settlement of any dispute as to whether or when an employee is or has become entitled to leave of absence or an allowance in lieu, or whether a deceased employee's personal representative is or has become entitled to payment of an allowance. The section stipulates that the Public Service Arbitrator shall hear and determine all such disputes.

### INDUSTRIAL DISPUTES

Statistics of industrial disputes refer only to those involving a stoppage of work of 10 man-days or more. The information is compiled from the following sources: (i) direct from employers and trade unions; (ii) reports from government departments and authorities; (iii) reports from state and federal industrial authorities; and (iv) information contained in trade journals, newspapers, etc. Particulars of some stoppages are estimated and the following statistics should be regarded as giving only a broad measure of industrial stoppages. The details relating to workers involved, working days lost and estimated loss in wages are in respect of those thrown out of work at the establishments where the stoppages actually occurred, only.

The record estimated loss in wages due to industrial disputes (involving stoppages of 10 days or more) in 1973 (\$2 322 400) represented an average loss of \$133 per worker for the 17 500 workers involved. The average loss per worker involved in 1979 was \$108. Details relating to the value of production lost as a direct result of industrial disputes are not available.

The next table summarises statistics relating to industrial disputes in Tasmania for the last six years:

Industrial Disputes (a): Tasmania

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
1974.....	79	33.6	88.5	1 800.9
1975.....	57	20.1	40.6	1 007.5
1976.....	43	30.9	62.2	1 792.7
1977.....	39	7.9	26.7	928.0
1978.....	46	17.1	35.4	1 356.0
1979.....	53	21.1	59.8	(b) 2 276.0

(a) The statistics relate to stoppages involving 10 man-days or more in the establishments where the stoppages occurred, only.

(b) The estimated Tasmanian loss was 1.5 per cent of the Australian total in 1979.

The next table summarises statistics relating to industrial disputes in Australia for the last six years:

## Industrial Disputes (a): Australia

Year	Disputes	Workers involved	Working days lost	Estimated loss in wages
	no.	'000	'000	\$'000
1974.....	2 809	2 004.8	6 292.5	128 301.8
1975.....	2 432	1 398.0	3 509.9	95 760.7
1976.....	2 055	2 189.9	3 799.2	114 552.0
1977.....	2 090	596.2	1 654.8	59 674.0
1978.....	2 277	1 075.6	2 130.8	78 404.0
1979.....	2 042	1 862.9	3 964.4	148 614.0

(a) The statistics relate to stoppages involving 10 man-days or more in the establishments where the stoppages occurred, only.

The following table analyses industrial disputes according to the industry of the labour force involved:

## Industrial Disputes by Industries: Tasmania

Period	Mining	Manufacturing						Construction
		Metal products, machinery and equipment	Textiles, clothing, footwear	Food, beverages, tobacco	Paper and paper products, printing and publishing	Other	Total manufacturing	

## NUMBER OF DISPUTES

1974.....	10	6	5	7	7	5	30	8
1975.....	8	6	—	6	5	5	22	9
1976.....	12	1	—	7	2	5	15	4
1977.....	14	3	—	1	2	3	9	6
1978.....	15	4	—	1	4	5	14	3
1979.....	13	6	—	1	3	2	13	3

## WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)

1974.....	0.8	5.7	4.2	4.5	3.9	0.1	18.5	6.7
1975.....	2.4	3.4	0.7	1.2	3.2	0.3	8.6	6.9
1976.....	3.6	4.4	1.9	2.2	1.2	4.4	14.1	3.8
1977.....	3.1	0.9	—	0.1	0.3	—	1.4	0.3
1978.....	3.0	5.2	—	1.3	1.6	0.3	8.4	1.3
1979.....	3.8	4.2	0.2	0.6	1.2	0.3	6.9	1.7

## WORKING DAYS LOST ('000)

1974.....	4.0	45.5	3.7	6.1	12.8	2.6	70.6	7.5
1975.....	8.9	14.4	1.6	3.5	2.7	1.1	23.3	5.9
1976.....	8.2	4.7	1.9	7.2	15.4	6.5	35.7	4.2
1977.....	18.2	0.9	—	0.8	0.2	0.2	2.0	3.0
1978.....	15.2	7.5	—	2.6	2.1	0.5	12.7	1.3
1979.....	19.9	15.4	0.5	1.3	5.6	0.8	24.7	2.9

## ESTIMATED LOSS IN WAGES (\$'000)

1974.....	97.1	927.4	60.8	106.2	281.2	59.1	1 434.7	164.1
1975.....	281.1	279.7	34.2	81.1	77.4	30.2	502.6	157.6
1976.....	307.0	120.1	49.8	186.4	371.8	184.4	912.5	135.7
1977.....	659.0	28.0	—	22.0	5.0	8.0	63.0	110.0
1978.....	669.0	250.0	—	77.0	78.0	19.0	424.0	44.0
1979.....	813.0	550.0	17.0	47.0	224.0	29.0	906.0	99.0

## Industrial Disputes by Industries: Tasmania—continued

Period	Railway transport, air transport	Road transport, other transport and storage, communication	Water transport		Entertainment, recreation, hotels, personal service, etc.	Other industries (a)	Total all industries
			Stevedoring services	Other water transport			
NUMBER OF DISPUTES							
1974 .....	3	4	8	2	3	11	79
1975 .....	2	1	5	5	2	3	57
1976 .....	3	2	—	3	—	4	43
1977 .....	3	1	—	2	1	3	39
1978 .....	2	5	2	1	1	1	46
1979 .....	3	5	2	—	—	6	53
WORKERS INVOLVED (DIRECTLY AND INDIRECTLY) ('000)							
1974 .....	0.4	0.4	1.6	—	0.9	4.2	33.6
1975 .....	0.5	—	0.7	0.4	0.2	0.5	20.1
1976 .....	1.6	1.7	0.2	0.1	0.4	5.5	30.9
1977 .....	0.4	1.2	—	0.1	1.2	0.2	7.9
1978 .....	0.3	1.6	0.8	—	0.2	0.1	17.1
1979 .....	1.1	2.5	0.6	—	0.2	3.3	21.1
WORKING DAYS LOST ('000)							
1974 .....	0.4	0.7	3.4	0.1	0.2	1.6	88.5
1975 .....	1.1	0.1	0.6	0.5	—	0.2	40.6
1976 .....	1.7	1.8	0.2	3.2	0.4	6.9	62.2
1977 .....	0.7	0.5	—	0.1	1.2	0.9	26.7
1978 .....	0.6	2.1	0.8	—	—	—	35.4
1979 .....	2.6	3.0	1.1	—	0.1	1.4	59.8
ESTIMATED LOSS IN WAGES (\$'000)							
1974 .....	1.6	14.0	54.1	2.3	2.6	30.3	1 800.9
1975 .....	26.1	3.7	16.8	15.4	0.9	3.3	1 007.5
1976 .....	47.7	73.0	5.3	120.3	9.6	181.7	1 792.7
1977 .....	34.0	17.0	—	5.0	30.0	10.0	928.0
1978 .....	21.0	75.0	27.0	1.0	1.0	—	1 356.0
1979 .....	91.0	101.0	40.0	—	4.0	50.0	2 276.0

(a) Includes: agriculture, grazing, etc.; finance and insurance; wholesale and retail trade; real estate and business services; electricity, gas and water; public administration and defence; and community services.

## Further References

## A.B.S. Publications

The information contained in this chapter is generally available in the 6000.0 series of publications produced by the Canberra Office of the ABS. The main bulletins of this series are the following:

- Labour Statistics (6101.0) (annual, 1978 issue released 1980, 102 pp.)
- The Labour Force (6203.0) (monthly, June 1980 released 19/10/80, 29 pp.)
- Civilian Employees (6213.0) (monthly, April 1980 released 8/7/80, 8 pp.)
- Survey of Persons Registered with the CES as Unemployed, March 1977 (24/6/77, 23 pp.)
- Average Weekly Earnings (6302.0) (quarterly, June quarter 1980 released 1/9/79, 4 pp.)
- Wage Rates (6312.0) (monthly, June 1980 released 30/7/80, 20 pp.)
- Industrial Disputes (6321.0) (monthly, May 1979 released 24/8/79, 2 pp.)
- Consumer Price Index (6401.0) (quarterly, June quarter 1980 released 24/7/80, 9 pp.)
- Average Retail Prices of Selected Food and Grocery Items, Six State Capital Cities and Canberra (6403.0) (quarterly, June quarter 1980 released 11/8/80, 2 pp.)

- Price Index of Materials Used in Building Other than House Building (6407.0) (monthly, August 1980 released 26/9/80, 8 pp.)
- Price Index of Materials Used in House Building (6408.0) (monthly, August 1980 released 29/9/80, 7 pp.)
- Price Index of Electrical Installation Materials (6409.0) (monthly, September 1980 released 8/10/80, 2 pp.)
- Price Index of Metallic Materials (6410.0) (monthly, July 1980 released 19/8/80, 2 pp.)
- Price Index of Materials Used in Manufacturing Industry (6411.0) (monthly, July 1980 released 1/10/80, 5 pp.)
- Price Index of Articles Produced by Manufacturing Industry (6412.0) (monthly, June 1980 released 12/8/80, 5 pp.)

*Other Publications*

- COMMISSION OF INQUIRY INTO POVERTY (R. F. Henderson, Chairman). *Poverty in Australia*, Vols. 1 and 2 (AGPS, Canberra, 1975).
- DEPARTMENT OF EMPLOYMENT AND YOUTH AFFAIRS. Monthly Review of the Employment Situation.

## Chapter 18

### MISCELLANEOUS

#### ECONOMIC CENSUSES AND SURVEYS

##### Introduction

Commencing with the year 1968-69, integrated censuses were introduced for the following sectors of the economy: mining; manufacturing; electricity and gas; retail trade; and wholesale trade. Since then, some sectors have been covered by regular annual economic censuses (e.g. mining) while others have not yet been the subject of a subsequent census (e.g. wholesaling). Also, data for the agricultural sector have recently been made available on a comparable basis. These have been based on a survey (the annual Agricultural Finance Survey) rather than a complete census. In the 1972 *Year Book*, Appendix A gave a detailed description of the first Australian Integrated Economic Censuses, conducted by the Australian Bureau of Statistics for the 1968-69 financial year. The various industry sectors currently covered by integrated economic censuses and the Agricultural Finance Survey are each featured in this book; references are: (i) *Agriculture*, Chapter 7; (ii) *Mining*, Chapter 8; (iii) *Manufacturing*, Chapter 9; (iv) *Electricity and Gas*, Chapter 9; and (v) *Retail Trade*, Chapter 10.

In this section are set out the definitions of terms and concepts which apply to the integrated economic censuses. Also, the results of those industry sectors covered by censuses in recent years, together with survey results for the agricultural sector, are brought together to allow inter-sector comparisons to be made. Comparison tables showing the results of the five 1968-69 censuses may be found in Chapter 18 of the 1977 *Year Book*.

##### Concepts and Definitions

For the 1968-69 and subsequent economic censuses uniform definitions and concepts have been used. This allows inter-sector comparisons (see later section) and increases the usefulness of the data derived from censuses for economic analysis and market research. Definitions and concepts used in these censuses are summarised below.

**Establishment:** Generally the establishment is the whole of each physical location operated by one enterprise, given that the main activity of the establishment is within scope of the census. Usually only one return is submitted for each establishment *classified to the industry of its main activity*. The principal exception to the 'one return one establishment' rule is where a secondary activity at a location creates gross receipts of \$1m or more. In such cases the secondary activity may have to be reported on a second return appropriate to its industry or its sector. Details for *administrative offices and ancillary units* (such as head offices, storage depots, garages, laboratories, etc.) which serve or administer establishments within the same enterprise but which are located away from them are treated as follows: (i) if only one establishment is served or administered then details are included in the establishment return; or (ii) if more than one establishment is served or administered, details are included on the enterprise return. *Manufacturers' sales branches* located away from the parent manufacturing establishment are treated as ancillary units provided they do not distribute goods to customers from their own holdings of stocks. If the unit does distribute from stocks in this manner then it is treated as an establishment and included in the wholesale sector.

**Electricity and Gas Industries—the Exception:** The single operating location is not suitable as a basis for enterprises engaged in producing or distributing electricity or gas. Therefore for electricity and gas industries, a special treatment was devised—the establishment unit for these industries consists of all locations operated by the enterprise in the one state.

**Enterprise:** This is broadly the operating legal entity and is the key unit for the collection of information. Where a number of legal entities operate as a group, owned or controlled by a single company, the enterprise is not the group as a whole, but each individual operating legal entity in the group.

**Enterprise Group:** Comprises a group of operating legal entities owned or controlled by a single company.

**Value Added:** Common to all sectors covered by integrated economic censuses is the following definition: value added *equals* turnover *plus* increase in stocks *minus* purchases, transfers in and selected expenses. The value added measure can then be aggregated for all establishments and sectors covered by the censuses *without duplication*. In broad terms, value added is the surplus from which establishments pay wages and salaries, interest, depreciation, rents and overheads. The remainder is available for appropriation as profits (after provision for income tax).

**Turnover:** The definition of turnover is as follows: (a) In manufacturing and mining censuses: (i) sales of goods produced by the establishment; (ii) sales of goods not produced by the establishment; (iii) transfers out of goods to other establishments of the same enterprise; (iv) bounties and subsidies on production; (v) all other operating income but excluding revenue from rent and leasing, interest other than hire purchase interest, dividends and sales of fixed tangible assets; and (vi) capital work done for own use or for rental or lease. (b) In retail and wholesale trade censuses: (i) sales of goods (owned by the enterprise); (ii) transfers out of goods to other establishments of the same enterprise (applies only to wholesale); (iii) selling and purchasing commissions received (applies only to wholesale); (iv) all other operating income but excluding items specified in (a) (v) above; and (v) goods withdrawn from stock for own use (as fixed tangible assets, or for rental or lease).

**Purchases and Selected Expenses:** Are defined as follows: (a) In manufacturing and mining censuses: (i) the value of purchases of materials, fuels, electricity and gas, and wrapping and packaging materials is supplemented by the value of transfers in from other establishments of the enterprise; (ii) purchases of goods for resale are included as well as purchases for own use in production; and (iii) selected expenses comprise repair and maintenance expenses, charges for sub-contract and commission work, outward freight and cartage, motor vehicle running expenses and sales commission payments. (b) In retail and wholesale trade censuses: (i) the value of purchases of goods for resale is widened to include purchases for both wholesale and retail trade, no matter whether the establishment is primarily a retailer or a wholesaler; (ii) the value of purchases also includes purchases of materials for manufacturing to cover cases where the retail or wholesale establishment has this secondary activity; and (iii) selected expenses comprise those specified in (a) (iii) above *plus* purchases of wrapping and packaging materials, and electricity and gas (see item (a) (i) in preceding manufacturing and mining group for the reason for this addition).

**Stocks:** Are the total held by the establishment and may therefore include some stocks held for secondary activities, e.g. a manufacturing establishment may have, in its stocks figure, merchanted goods held or a retail establishment may include in its return, stocks held for wholesaling and manufacturing.

**Transfer Values:** Transfers, both in and out, are confined to transfers of goods; the term is further narrowed to mean transfers between establishments of the same enterprise. Provision exists for recording transfers in all census sectors except retail trade and here the instruction requires purchases to be reported inclusive of transfers in, but net of transfers out. Thus, transfers are taken into account in arriving at value added since transfers out, as just defined, are a part of turnover and transfers in are a part of purchases and selected expenses.

**Employment, Salaries and Wages:** In accordance with the new concept of treating the establishment as a whole, all employees are entered, including those working in administrative offices and ancillary units which serve only the one associated establishment.

**Fixed Capital Expenditure:** The general basis for collection is: purchases of new and second-hand assets *less* sales of second-hand assets. (For establishments of multi-establishment enterprises, transfers from other establishments of the enterprise are treated as purchases, and transfers to such establishments are treated as sales.) The dissection of fixed capital expenditure comprises expenditure on: (i) motor vehicles; (ii) land and buildings; and (iii) plant and machinery. A further distinction is made between new assets and second-hand assets.

### *Industrial Classification*

The Australian Standard Industrial Classification (ASIC) (Preliminary 1969 Edition) was adopted for use in the 1968-69 and subsequent economic censuses. The 1978 Edition of ASIC was used for economic censuses from 1977-78. ASIC defines the industries for which statistics are collected in the censuses and allows the scope of the individual censuses to be marked out without gaps or duplications between them. It also identifies the statistical units (establishments, enterprises, etc.) and lays down standard rules for identifying and coding them to industries of the classification. A detailed description of ASIC may be found in the Bureau publication *ASIC, Australian Standard Industrial Classification, 1978 Edition Vol. 1: The Classification* (1201.0).

### *Agricultural Sector Financial Statistics*

From 1968-69, the Bureau has progressively developed agricultural industry finance surveys to obtain: firstly, details of farm expenditure; and, more recently, a wide range of financial data on a compatible basis to that available for industry sectors covered by the integrated economic censuses. The coverage of the 1974-75 and subsequent Agricultural Finance Surveys has consisted of a randomly selected sample of agricultural enterprises (classified to ASIC Subdivision 01). Results of these surveys have been used to calculate estimates covering all agricultural enterprises. A complete agricultural sector economic census of all agricultural enterprises has not been conducted, nor is one proposed, because of the high cost involved.

The concepts and definitions used are basically the same as those outlined above for the integrated economic censuses. Additional notes are set out below:

**Value Added:** When determining the 'increase in stocks' only livestock is taken into account due to its relative significance and to the difficulties associated with including other farm stocks.

**Turnover:** Turnover of agricultural enterprises includes proceeds received during the year (which do not necessarily relate to the production of that year) from the sale of crops, livestock and livestock products, and other miscellaneous revenue. Miscellaneous revenue includes both sundry agricultural proceeds (such as proceeds from insurance recoveries, agistment, livestock service, artificial insemination, government relief payments, agricultural services such as contract shearing, harvesting, etc.) and also receipts from any non-agricultural activity of the enterprise.

**Purchases and Selected Expenses:** Include cash payments made during the year for goods and services including marketing expenses; purchases of livestock, feed, fodder, fertiliser, chemicals and veterinary supplies and services; payments for electricity, fuel, water and drainage; payments to contractors; repairs and maintenance to motor vehicles, machinery, equipment, buildings, structures and fences; motor vehicle registration and insurance; insurance of plant; payments for agistment; etc.

**Adjusted Value Added:** This is value added *plus* rent and leasing revenue (other than land) *less* rates and taxes, insurance payments, other expenses, and rent and leasing expenses (other than land).

**Gross Operating Surplus:** is adjusted value added *less* wages, salaries and supplements.

**Cash Operating Surplus:** is gross operating surplus *less* the increase in value of livestock, interest and land rent paid *plus* interest and land rent received. It is the surplus available for profit, income tax and depreciation provisions.

**Net Capital Expenditure:** is the expenditure on new and second-hand assets *less* sales of existing assets and trade-in allowances.

**Gross Indebtedness:** is the total amount owing at 30 June.

### *Construction Sector Statistics*

A sample survey of private construction establishments was conducted for the first time in 1978-1979. The scope of the survey included all private sector establishments and ancillary units predominantly engaged in construction activities, i.e. those establishments classified to the industries in Division E of the ASIC.



At the same time, details were collected from all public sector establishments classified to construction activity but, because of different definitions, the public sector construction activity data cannot be validly aggregated with private sector construction establishment data to give 'total construction'. Construction sector data included in the accompanying tables are, accordingly, in respect of the private sector, only.

### Comparisons Between Industry Sectors

Principal items from economic censuses conducted in recent years are shown below:

#### Mining and Manufacturing Censuses and Construction Industry Survey, Tasmania

ASIC classification of establishments and year	Number of establishments at 30 June	Persons employed at 30 June	Wages and salaries	Value added
		no.	\$'000	\$'000
Mining (a)—				
1973-74 .....	56	4 317	30 623	85 321
1974-75 .....	56	4 450	43 026	80 903
1975-76 .....	57	4 248	47 197	80 607
1976-77 .....	63	4 133	51 538	118 619
1977-78 (c) .....	63	4 241	53 870	143 877
1978-79 .....	66	4 356	63 122	183 963
Manufacturing—				
1973-74 .....	935	32 359	161 386	340 250
1974-75(b) .....	628	28 708	194 883	402 255
1975-76 .....	667	27 753	211 327	456 029
1976-77 .....	617	28 308	246 014	533 288
1977-78(c) .....	599	27 037	258 341	497 979
1978-79 .....	552	26 329	266 099	549 372
Construction (d)— 1978-79 .....	1 446	7 601	55 703	103 036

(a) Census results exclude 'small' tin miners whose sales were less than \$20 000.

(b) From 1974-75 the Census results exclude single establishment enterprises employing less than four employees at 30 June.

(c) From 1977-78 the census results are based on the 1981 edition of ASIC.

(d) Private sector only. Since estimates are based on sample surveys they are subject to sampling errors.

As already noted, value added is a measure that can be aggregated and directly compared for all establishments and industry sectors for which it has been determined, *without duplication*. The following table compares the industry sectors of agriculture, mining and manufacturing on the basis of value added for recent years:

#### Integrated Economic Censuses and Agricultural Finance Survey, Tasmania: Value Added

Industry sector	1976-77		1977-78		1978-79	
	Value added	Per head of mean population	Value added	Per head of mean population	Value added	Per head of mean population
Agriculture (a) .....	\$m 77.9	\$ 190	\$m 87.2	\$ 212	\$m n.a.	\$ n.a.
Mining .....	118.6	290	143.9	349	184.0	443
Manufacturing .....	533.3	1 304	498.0	1 209	549.4	1 322
Construction (a) .....	n.a.	n.a.	n.a.	n.a.	103.0	247

(a) Since the estimates are based on sample surveys they are subject to sampling errors. 'Standard errors' indicating the reliability of the estimates are included in the Canberra Office publications *Agricultural Sector, Part IV, Financial Statistics* (Cat. No. 7507.0) and *Private Sector Construction Establishments* (Cat. No. 8720.0).

## AUSTRALIAN NATIONAL ACCOUNTS

### Introduction

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy. National accounts statistics therefore provide a medium for describing or analysing the forces that drive and shape the economy.

Estimates of national income and expenditure are compiled by the Bureau and presented in a regular sequence of national accounts publications, in which the first estimates for the year just completed are successively revised and additional detailed tables are issued as further information becomes available. The cycle begins in August with the Budget White Paper *National Income and Expenditure* (5213.0) which gives preliminary estimates for the year just completed and later estimates for the previous four years. The June quarter issue of *Quarterly Estimates of National Income and Expenditure* (5206.0) follows shortly after this with estimates for quarters for the year just completed and for the previous two years. Issues for subsequent quarters may revise the past quarterly estimates as they add additional quarters and may revise annual estimates for some items for the most recent years. The majority of revisions are the result of changes in principles and definitions rather than the correction of errors. *Australian National Accounts, National Income and Expenditure* (5204.0) is the most comprehensive national accounts publication; after estimates for this publication are finalised in about February and sent for printing, mimeographed *Preliminary Statements* are issued which make available selected tables in advance.

### Description of National Income and Expenditure Accounts

A brief description of the conceptual basis of national accounts is given in the 1977 *Year Book*, but for a more detailed treatment of the concepts and structure of the Australian National Accounts reference should be made to the 1976-77 issue of *Australian National Accounts, National Income and Expenditure* (Cat. No. 5204.0).

### Australian National Accounts Statistics

The next table gives details of the items on the receipts side of the domestic production account for recent years. Estimates of gross domestic product at average 1974-75 prices are also included. Such estimates are described as *estimates at constant prices* and are designed to remove the direct effect of price changes from the original (current prices) estimates. Estimates at constant prices are largely based on the application of specially constructed price indexes. All estimates shown below are expressed in current prices unless otherwise stated. They have been taken from the 1978-79 issue of *Australian National Accounts, National Income and Expenditure* (5204.0) and are subject to revision.

**Gross Domestic Product, Australia r**

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 p
Wages, salaries and supplements ..... \$m	28 124	36 110	41 539	46 934	51 534	55 505
Gross operating surplus—						
Trading enterprises—						
Companies ..... \$m	6 762	7 268	8 258	9 724	10 556	10 992
Unincorporated enterprises ..... \$m	7 539	7 660	8 501	9 617	10 094	13 231
Dwellings owned by persons ..... \$m	2 728	3 368	4 157	5 115	6 157	7 155
Public enterprises ..... \$m	1 237	1 125	1 641	1 916	2 049	2 379
Financial enterprises ..... \$m	861	1 076	1 758	2 016	1 914	2 189
Less Imputed bank service charge ..... \$m	1 284	1 519	1 727	1 972	2 154	2 383
Gross domestic product at factor cost ..... \$m	45 967	55 088	64 127	73 350	80 150	89 068
Indirect taxes less subsidies ..... \$m	5 303	6 614	8 275	9 752	10 357	12 138
<b>Gross domestic product ..... \$m</b>	<b>51 270</b>	<b>61 702</b>	<b>72 654</b>	<b>83 102</b>	<b>90 507</b>	<b>101 206</b>

Gross Domestic Product, Australia *r*—continued

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 <i>p</i>
Percentage increase in G.D.P. (a) .....	20.0	20.3	17.7	14.4	8.9	11.8
G.D.P. at average 1974-75 prices—						
Value .....	\$m 60 758	61 702	63 285	65 254	65 708	68 166
Percentage increase (a) .....	5.4	1.6	2.6	3.1	0.7	3.7
G.D.P. implicit price deflator—						
Index number (1974-75=100.0)	84.4	100.0	114.8	127.4	137.7	148.5
Percentage increase (a) .....	13.9	18.5	14.8	11.0	8.1	7.8
Gross farm product .....	\$m 4 252	3 766	3 800	4 236	4 031	6 618
Gross non-farm product .....	\$m 47 018	57 936	68 854	78 866	86 476	94 588

(a) Over previous year.

**Implicit Price Deflators:** Indexes such as the gross domestic product implicit price deflators are obtained (to the base: year used as base for the constant prices series=100) by dividing aggregate flows of goods and services measured at current prices by the corresponding estimates at constant prices and multiplying by 100. Implicit price deflators have limitations as indicators of price change as they can be affected by the physical composition of the aggregates and components to which they refer (they are *not* 'fixed weight' indexes), and by seasonal factors, and the aggregates are subject to revision. These limitations render implicit price deflators of limited value in assessing quarterly price changes but are seldom of great significance with regard to annual national accounting aggregates.

The next table shows details for items making up the receipts side of the general government income and outlay account. Percentage increases are also shown for major items, the consumer price index (six state capitals combined), and the G.D.P. implicit price deflator. The latter give some perspective to the monetary values (current prices) which are subject to growth due to price increases as well as being subject to *real* growth in the preceding table. In 1978-79 total 'General government receipts' as a proportion of gross domestic product was 31.7 per cent compared with 29.0 per cent in 1973-74.

General Government Income and Outlay Account, Australia: Receipts *r*

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 <i>p</i>
AMOUNT (\$ million)						
Income from public enterprises .....	684	548	895	1 188	1 370	1 672
Interest, etc., received .....	430	555	604	800	981	1 008
Indirect taxes .....	5 686	6 976	8 879	10 091	10 847	12 703
Direct taxes on income—						
Companies .....	1 934	2 344	2 505	2 803	3 072	3 002
Households .....	5 485	7 709	9 213	11 047	12 122	12 797
Withholding taxes .....	79	88	95	96	118	114
Other direct taxes, fees, fines, etc. ....	563	590	682	785	844	821
Total receipts .....	14 861	18 810	22 873	26 810	29 354	32 117

## PERCENTAGE INCREASE OVER PREVIOUS YEAR

Indirect taxes .....	24.5	22.7	27.3	13.7	7.5	17.1
Direct taxes on income—						
Companies, etc. ....	25.2	21.2	6.9	11.9	9.6	-2.3
Households .....	34.3	40.5	19.5	19.9	9.7	5.6
Total receipts .....	25.0	26.6	21.6	17.2	9.5	9.4
Consumer price index (a) .....	12.9	16.7	13.0	13.8	9.5	8.2
G.D.P. implicit price deflator .....	13.9	18.5	14.8	11.0	8.1	7.8

(a) Weighted average for the six state capital cities (all groups).

### National Accounts Statistics Relating to Tasmania

The following tables are included to provide information relating to household income and private final consumption expenditure within Tasmania during the last six years, together with an analysis of Tasmanian farm income during the same period. Two tables which show Tasmanian figures relative to those of the other Australian states are also included. Relevant definitions are given below:

**Household Income** is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interests, etc.). Household income also includes any property income received by non-profit organisations such as private schools, churches, charitable organisations, etc. That part of farm income accruing to unincorporated enterprises is included under household income.

**Farm Income** is the difference between the gross value of farm production (after stock valuation adjustment) and total costs (i.e. production costs plus net rent and interest paid and third party insurance transfers) incurred.

**Private Final Consumption Expenditure** covers the expenditure on goods and services by persons and expenditure of a current nature by non-profit organisations serving households. Goods and services purchased by businesses or general government are excluded. It excludes the purchase of dwellings and capital expenditure by non-profit organisations.

#### Household Income: Tasmania r

Particulars		1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 p
Wages, salaries and supplements .....	\$m	710	936	1 060	1 226	1 318	1 427
Income of farm unincorporated enterprises .....	\$m	64	28	29	63	74	133
Income of other unincorporated enterprises .....	\$m	87	108	132	147	159	174
Income from dwellings .....	\$m	22	25	33	42	53	65
Transfers from general government .....	\$m	105	147	196	237	266	291
All other income .....	\$m	101	129	150	172	201	231
Total household income .....	\$m	1 089	1 373	1 600	1 887	2 071	2 321
Less Income tax payable .....	\$m	140	206	249	309	324	n.y.a.
Other direct taxes fees, fines, etc. ....	\$m	12	12	16	19	19	n.y.a.
Consumer debt interest .....	\$m	15	18	21	25	31	n.y.a.
Transfers overseas .....	\$m						
Household disposable income—							
Amount .....	\$m	922	1 137	1 314	1 534	1 697	n.y.a.
Percentage increase (a) .....		18.1	23.3	15.6	16.7	10.6	n.y.a.

(a) Over previous year.

#### Household Income by States, 1978-79

N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	N.T.	Australia
TOTAL INCOME (\$ million)								
31 239	23 805	12 665	7 805	7 024	2 321	1 490	684	87 033
INCOME PER HEAD OF MEAN POPULATION (\$)								
6 194	6 205	5 808	6 047	5 702	5 586	6 810	5 989	6 073

**Farm Income: Tasmania**  
(\$ million)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Gross value of farm production—						
Wool (including skin wool) . . . . .	32	24	28	35	37	42
Livestock slaughterings . . . . .	58	32	34	45	58	94
Grain crops . . . . .	3	3	2	4	3	5
Fruit . . . . .	15	16	14	13	15	22
Other crops . . . . .	29	31	28	42	38	60
Other livestock products . . . . .	26	31	34	41	44	53
Total . . . . .	163	137	140	180	195	276
Less Stock valuation adjustment . . . . .	-1	-	-	-	-	94
Less Production costs other than wages and depreciation—						
Marketing costs . . . . .	16	17	13	15	18	
Seed and fodder . . . . .	14	16	12	r 16	14	
Other costs . . . . .	32	35	41	r 44	44	
Gross farm product at factor cost . . . . .	102	69	74	105	119	182
Indirect taxes less subsidies . . . . .	4	6	7	8	6	7
Gross farm product at market prices . . . . .	106	75	81	113	125	189
Less Depreciation . . . . .	10	r 9	r 10	r 10	12	47
Less Wages, net rent and interest paid and third party insurance transfers . . . . .	25	32	r 34	r 31	32	
Less Indirect taxes less subsidies . . . . .	4	6	7	8	6	
Farm income . . . . .	67	r 28	r 30	r 64	r 75	135
PERCENTAGE INCREASE (OF TOTAL) OVER PREVIOUS YEAR						
	26.4	-58.2	7.1	113.3	17.2	80.0

**Private Final Consumption Expenditure: Tasmania r**  
(\$ million)

Particulars	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79 p	
						Amount	Per cent
Food . . . . .	149	172	191	230	249	260	16.0
Cigarettes and tobacco . . . . .	22	25	31	34	35	38	2.3
Alcoholic drinks . . . . .	49	62	70	77	90	103	6.3
Clothing, etc. . . . .	81	101	104	120	135	143	8.8
Health . . . . .	47	59	72	83	92	100	6.2
Rent . . . . .	88	110	135	165	194	219	13.5
Gas, electricity, fuel . . . . .	24	29	36	40	46	55	3.4
Household durables . . . . .	66	91	117	132	138	137	8.4
Newspapers, books, etc. . . . .	16	17	21	25	32	35	2.2
All other goods, n.e.i. . . . .	36	45	49	57	62	72	4.4
Travel and communication . . . . .	123	155	185	210	227	255	15.7
All other services . . . . .	101	123	143	166	188	208	12.8
Total . . . . .	802	989	1 154	1 339	1 488	1 625	100.0
PERCENTAGE INCREASE (OF TOTAL) OVER PREVIOUS YEAR							
	19.2	23.3	16.7	16.0	11.1	9.2	..

**Private Final Consumption Expenditure: States, 1978-79 p**  
(\$ million)

Particulars	N.S.W. and A.C.T.	Vic.	Qld.	S.A. and N.T.	W.A.	Tas.	Australia	
							Amount	Per cent
Food .....	3 843	2 909	1 583	994	935	<b>260</b>	10 524	17.1
Cigarettes and tobacco ..	518	330	178	133	108	<b>38</b>	1 305	2.1
Alcoholic drinks .....	1 562	829	565	305	354	<b>103</b>	3 718	6.1
Clothing, etc. ....	1 804	1 231	663	459	383	<b>143</b>	4 683	7.6
Health .....	1 559	1 033	480	376	293	<b>100</b>	3 841	6.3
Rent .....	3 999	2 869	1 339	915	793	<b>219</b>	10 134	16.5
Gas, electricity, fuel ....	489	459	168	122	124	<b>55</b>	1 417	2.3
Household durables ....	1 934	1 253	720	503	448	<b>137</b>	4 995	8.1
Newspapers, books, etc. ....	392	259	161	96	76	<b>35</b>	1 019	1.7
All other goods, n.e.i. ...	980	707	385	278	228	<b>72</b>	2 650	4.3
Travel and communica- tion .....	3 626	2 476	1 365	832	775	<b>255</b>	9 329	15.2
All other services .....	3 161	2 110	1 065	642	579	<b>208</b>	7 765	12.7
<b>Total .....</b>	<b>23 867</b>	<b>16 465</b>	<b>8 672</b>	<b>5 655</b>	<b>5 096</b>	<b>1 625</b>	<b>61 380</b>	<b>100.0</b>

PERCENTAGE INCREASE (OF TOTAL) OVER 1977-78

	12.6	10.8	12.9	10.4	9.7	<b>9.2</b>	(a) 11.6	..
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(a) At average 1974-75 prices, the total for Australia for 1978-79 was \$39 943m, an increase of only 2.4 per cent over 1977-78.

### HOUSEHOLD EXPENDITURE SURVEY

Details from household expenditure surveys conducted by the A.B.S. in respect of 1974-75 and 1975-76 are summarised in the 1980 edition of the *Year Book* (pp. 516-520).

### INCOME TAX RATES

#### Introduction

As noted in Chapter 5, income tax was first introduced in Australia in the colony of South Australia in 1884 and by 1915 had been adopted by all state governments and the Federal Government. Uniform income taxation throughout Australia was first adopted in 1942 when the Federal Government became the sole authority levying this tax. This continued until 1977-78 when, under new federal-state income tax sharing arrangements, each state was given the right to impose a surcharge or grant a rebate on personal income tax levied in its state. (However, no state government had exercised this option by mid-1980.)

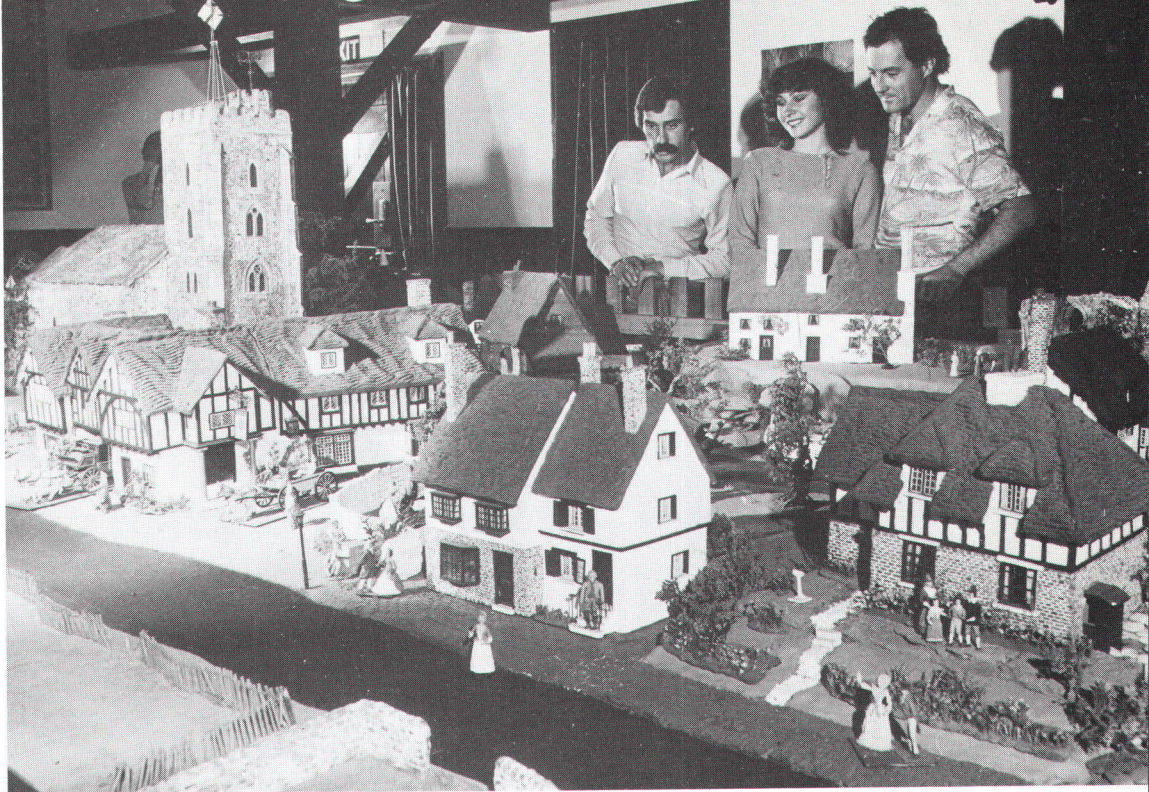
This section sets out income tax rates that apply to companies and details of the personal income tax system. (The 1977 *Year Book* included an outline of personal income tax in Australia for the period 1954-55 to 1976-77, pp. 654-662.)

**Taxable Income:** Expenses incurred in producing assessable income, certain specified deductions and losses incurred in previous years may be allowable deductions in calculating taxable income.

#### Company Income Tax

For the income years 1976-77 to 1979-80, company tax rates were set at 41 per cent of taxable income for non-profit friendly society dispensaries and 46 per cent for all other companies.

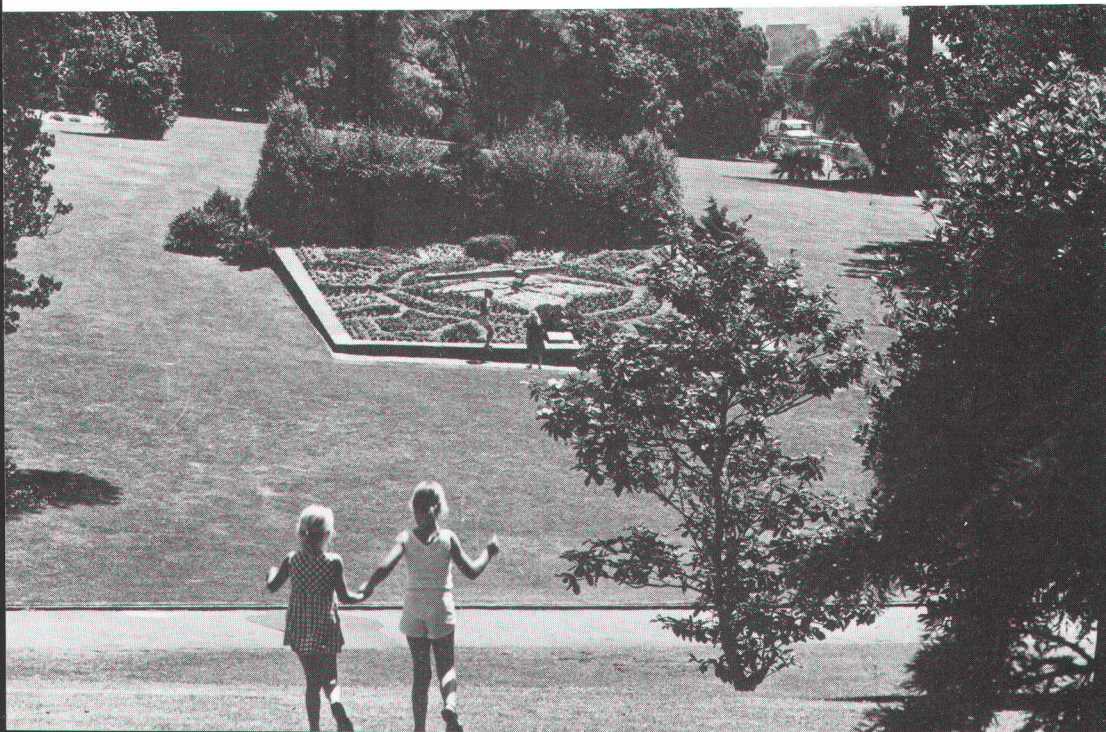




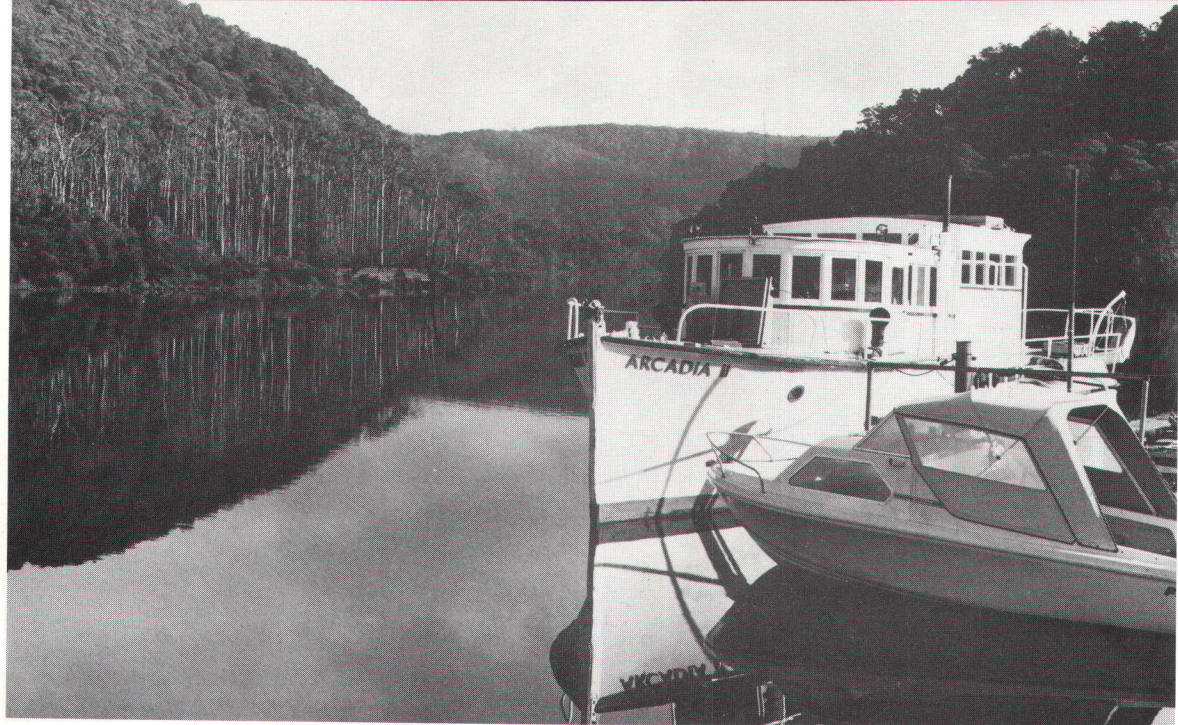
1. The Tudor Village, Sandy Bay, Hobart; a popular tourist attraction

*[Tasmanian Film Corporation]*

Floral clock at the Royal Tasmanian Botanical Gardens, Hobart



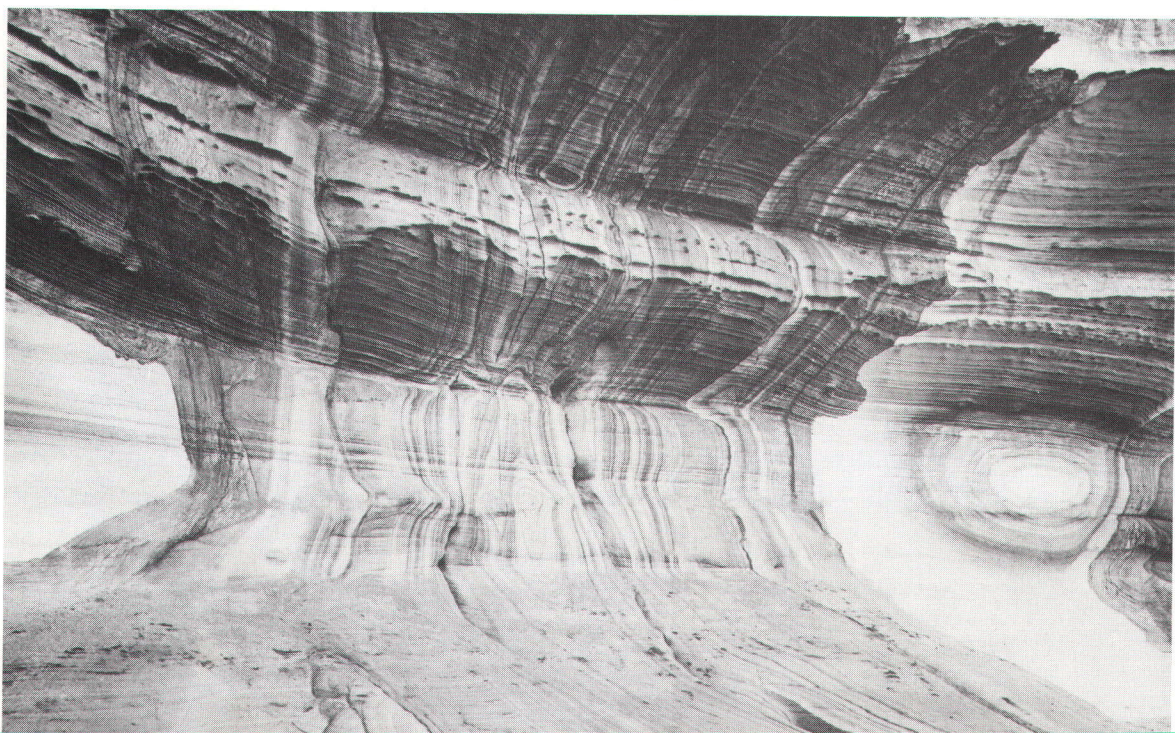




Scene near Corinna on the Pieman River

*[Tasmanian Film Corporation]*

Sandstone cliffs on Maria Island





It is noted that the tax payable by companies during the financial year 1980-81 is based on income derived during the year ended 30 June 1980 or substituted accounting period.

#### *Introduction of Trading Stock Valuation Adjustment*

The Income Tax Assessment Amendment Bill 1977 inserted a new subdivision—Subdivision BA of Division 3—in the *Income Tax Assessment Act* for the purpose of authorising deductions by way of trading stock valuation adjustments. The broad strategy of the adjustments scheme was to allow taxpayers who carry on a business a special deduction from their assessable income (to allow for the effect of inflation). This was related to the value of specified trading stock on hand at the commencement of the year of income. The deduction was ascertained by applying to the value of that trading stock, a percentage equal to one-half of the percentage increase in the index for the goods component of the Consumer Price Index between the June quarter of the year preceding the year of income and the June quarter of the year of income. The deduction was available in respect of the year of income that commenced on 1 July 1976 and subsequent years up to 1978-79. This system was intended to reduce the artificial increase in taxable income due to inflation. However, termination of the system from the commencement of the 1979-80 income year was announced by the Federal Government on 24 May 1979.

#### *Retention Allowances of Private Companies*

Under Division 7 of the *Income Tax Assessment Act*, a private company becomes liable to additional tax if it does not distribute a prescribed proportion of after-tax taxable income. The purpose of the provision is to maintain, as far as practicable, equity of treatment between shareholders in private companies and persons who operate unincorporated businesses as sole traders or partnerships. Without such a provision, extensive tax minimisation, by retention of profits in the private company's hands, would be expected where the rate of company tax (currently 46 per cent) is well below the maximum marginal rate of tax on individuals (61.07 per cent for 1979-80).

The 1979-80 Federal Budget increased the retention allowance in respect of trading profits from 60 per cent in 1978-79 to 70 per cent maximum for the 1979-80 income year, thus placing more funds at the direct disposal of private companies for purposes of expansion and development. The allowance in respect of property remained unchanged at 10 per cent (maximum retention).

#### **Introduction of Personal Tax Indexation**

In a statement read to the House of Representatives on 20 May 1976, the Federal Treasurer announced the introduction of full personal income tax indexation from 1 July 1976. Tax indexation was to be applied for income years ending on 30 June on the basis of the percentage change in the Consumer Price Index (for the six state capitals) for the latest year ended 31 March over the preceding year ended 31 March, adjusted to offset the effect of changes in indirect taxes on the index. (The Consumer Price Index number for a year ending 31 March is the average of the four quarterly C.P.I. numbers for that year.) Indexation changes were to be applied in respect of the tax scale (taxable income brackets), the general (minimum) concessional tax rebate, dependant rebates and the maximum separate net income which does not affect dependant rebate levels. The indexation factor applied to the 1975-76 taxable income brackets, dependant rebates and the general (minimum) concessional tax rebate, to arrive at the 1976-77 tax scale, was +13.0 per cent.

#### *The Rationale For Tax Indexation*

The aim of tax indexation is to ensure that income tax, as a proportion of income, remains unchanged from one year to the next for a person whose income keeps pace exactly with price rises as measured by the Consumer Price Index (adjusted to offset the effect of changes in indirect taxes). It therefore ensures that tax remains constant in *real* terms for a person whose income remains constant in *real* terms (provided the Government does not separately increase or decrease the tax rates). Indexation should, therefore, ensure that the level of income taxation does not continue to constantly rise due to inflation, but that, to change it, legislation is required. (This has not in fact occurred fully under the system adopted in Australia as the indexation provisions have not applied to the maximum limits applying to

items of concessional (rebatable) expenditure. Also, with the introduction of indexation for the 1976-77 income year, tax rebates, which had previously applied in respect of dependent children, were abolished. This was offset by significant increases in family allowance payments (see Chapter 15) payable in respect of dependent children but the amounts involved have *not* been subject to indexation adjustments to take account of inflation. Furthermore, the Government legislated to apply less than full indexation for the years 1978-1979 to 1980-1981.)

### History of Tax Indexation

Following the introduction of personal tax indexation for the 1976-77 income year, full indexation (subject to discounting for changes in indirect taxes) was also applied in respect of the 1977-78 income year. However, for the years 1978-79 to 1980-1981, the Federal Government legislated to apply less than full tax indexation.

#### *Changes to the Scheme from 1977-78*

The 1977-78 Federal Budget (introduced on 16 August 1977) included provisions for significant changes to the personal income tax system. A new tax rate scale was introduced which was used as the basis for calculating P.A.Y.E. deductions from 1 February 1978. The general concessional rebate of \$676 was abolished; the only concessional expenditure to attract a rebate was that in excess of \$1 590 at a reduced rate of 32 cents in the dollar. The actual effective rates of tax for 1977-78 were a composite of those for this new scheme and the pre-Budget scheme based on indexation of the 1976-77 tax scale (details are set out in the 1978 *Year Book*). The maximum amounts that could be included as concessional expenditure for specified types of expenditure, dependant rebates and the sole parent rebate remained unchanged. The marginal ('standard') tax rates applying from 1 February 1978 were: nil (up to an income of \$3 750; 32 cents in the dollar (on each dollar in the range \$3 751 to \$16 000); 46 cents in the dollar (\$16 001 to \$32 000); and 60 cents in the dollar (\$32 001 and over).

For 1978-79 only half indexation was applied to the tax brackets (see the 1980 *Year Book* for further details). In addition, a tax surcharge was applied—all tax rates (apart from the zero rate) were increased by 1.5 cents in the dollar (i.e. an increase of 4.7 per cent in the standard rate—from 32 cents to 33.5 cents in the dollar).

No tax indexation adjustment was applied for the 1979-80 income year and in addition, a surcharge of 1.07 cents in the dollar was applied to the normal rates (32, 46 and 60 cents in the dollar). (This represented a 3.3 per cent increase in the standard rate—33.07 cents in the dollar instead of 32 cents.) Details are included in the 1980 *Year Book*.

Partial tax indexation was re-introduced for the 1980-81 income year with taxable income ranges in the rates scale being indexed upwards by 3.8 per cent.

### Personal Income Tax 1980-81

On 6 March 1980, the Federal Treasurer announced that partial personal tax indexation would be re-introduced for 1980-81. Fifty per cent indexation was to apply—the indexation factor determined (after discounting in respect of price increases resulting directly from the Government's actions such as those for petrol and health insurance) was 1.038. (The consumer price index numbers for the six state capitals combined for the years ending 31 March 1979 and 31 March 1980 were 255.3 and 280.0, respectively, giving a non-discounted indexation factor of 1.097 (9.7 per cent). However, this figure was not available at the time of the Treasurer's announcement.) The indexation factor of 1.038 was applied to the taxable income ranges, only. The Treasurer announced increases of 34 per cent in dependant and sole parent rebates to apply as from 1 July 1980. Also, the surcharge on the normal tax rates was to be removed from 1 July 1980.

#### *1980-81 Tax Rates*

The following table shows tax scales applying for the 1980-81 income year:

## Income Tax Rates, 1980-81 (a)

Taxable income (b) bracket	Marginal tax rate (c)	Gross tax	
		On income in bracket specified in first column	Cumulative (i.e. on higher figure in first column) (d)
\$	cents per \$	\$	\$
1—4 041 .....	—	—	—
4 042—17 239 .....	32·00	4 223·36	4 223·36
17 240—34 478 .....	46·00	7 929·94	12 153·30
Over 34 478 .....	60·00	..	..

(a) As announced in March 1980.

(b) Gross income less: expenses incurred in earning that income; subscriptions to trade, business or professional association or union; and gifts to approved funds or institutions.

(c) Marginal rate payable in respect of each dollar in the range specified.

(d) Subject to reduction (if applicable) by: (i) 32 per cent of total concessional (rebatable) expenditure in excess of \$1 590; (ii) tax rebates in respect of dependants, housekeeper or sole parent; (iii) Zone A rebate of \$216 plus 25 per cent of rebates for dependants, including notional rebates for dependent children and students, or Zone B rebate of \$36 plus 4 per cent of rebates for dependants including notional rebates for dependent children and students; and (iv) a rebate of 30 cents for each dollar of paid-up capital subscribed to certain petroleum exploration and mining companies.

## Dependant and Sole Parent Rebates

The dependant and sole parent rebates for 1980-81 are 34 per cent above those that applied for 1978-79 and 1979-80 and are shown below:

## Dependant and Sole Parent Rebates, 1980-81

Dependant	Maximum tax rebate (a)
	\$
Dependent spouse or daughter-housekeeper .....	800
Housekeeper (b) .....	800
Parent or parent-in-law .....	722
Invalid relative .....	362
Sole parent (c) .....	559

(a) Reduced proportionately if dependant was only dependent upon the taxpayer for part of the year. Each rebate, except the sole parent and housekeeper rebate, is reduced by one dollar for every four dollars by which the dependant's separate net income exceeds \$272.

(b) Allowable, subject to certain other conditions, only if no daughter-housekeeper or sole parent rebate claimed.

(c) Allowable to a sole parent if neither a daughter-housekeeper nor a housekeeper rebate is claimed.

## Concessional Rebates

The maximum concessional expenditure limits have remained unchanged since 1975-76 with the exception of health insurance contributions (see note (a) to the next table). For the income years 1975-76 and 1976-77, a concessional rebate of 40 per cent of *all* allowable concessional expenditure applied, including *minimum* concessional tax rebates of \$540 and \$610 for 1975-76 and 1976-77, respectively. However, for the years 1977-78, 1978-79, 1979-80 and 1980-81 the concessional rebate was reduced to 32 per cent, 33½ per cent, 33·07 per cent and 32 per cent, respectively, of concessional expenditure *in excess* of \$1 590. The maximum amounts of concessional (rebatable) expenditure in respect of qualifying items are shown in the following table:

## Personal Income Tax: Concessional Expenditure Limits, 1975-76 to 1980-81

Particulars	Maximum rebatable expenditure
Rates and land taxes on principal residence .....	\$ 300
Health insurance costs .....	(a)
Direct medical, dental, optical, etc. expenses (b) (c) .....	no limit
Funeral expenses (b) .....	100 (per dependant)
Life insurance premiums plus superannuation contribution (d) .....	1 200
Education expenses (e) .....	250 (Per student)
Self-education expenses .....	250
Adoption expenses .....	no limit
Calls paid on shares in afforestation companies .....	$\frac{1}{3}$ amount paid

- (a) For the income year 1975-76 there was no limit on subscriptions paid to registered medical and hospital benefits funds for the personal benefit of a taxpayer, his spouse or children. However, for 1976-77 such subscriptions allowable as rebatable concessional expenditure were limited to: (i) amounts paid by a taxpayer between 1 July 1976 and 1 October 1976 for cover up to 1 October 1976; and (ii) amounts paid prior to 1 October 1976 giving entitlement beyond that date in respect of cover in excess of 'standard' medical and hospital cover. Health insurance contributions paid after 1 October 1976 are not allowable concessional expenditure subject to rebate.
- (b) In respect of a resident taxpayer and/or his 'dependants' who are residents.
- (c) Net of refunds.
- (d) For benefit of the taxpayer, or the spouse or child of the taxpayer.
- (e) In respect of the taxpayer's child or other dependant under 25 for whom the taxpayer is entitled to a rebate or notional rebate.

## Changes in the Level of Personal Income Tax

Frequent changes to the tax system in Australia over recent years make it difficult to assess the rate of increase in personal income taxation in real terms by comparing tax rates from year to year. The following table shows the percentage increases in net income tax assessed per taxpayer for recent years, together with Consumer Price Index (C.P.I.) increases, for Australia and Tasmania:

## Federal Personal Income Tax Assessed

Income year	Australia					Tasmania		
	Number of tax- payers	Income tax assessed			Increase in the C.P.I.  (a)	Income tax assessed per taxpayer		Increase in the C.P.I.  (b)
		Total	Per taxpayer			Amount	Increase (c)	
			Amount	Increase (c)				
		\$'000	\$	per cent	per cent	\$	per cent	per cent
1973-74 .....	5 420 004	5 227 738	965	33.0	12.9	867	35.9	12.5
1974-75 .....	5 551 322	6 570 765	1 184	22.7	16.7	1 112	28.3	16.9
1975-76 .....	5 334 818	8 767 981	1 644	38.9	13.0	1 585	42.5	14.0
1976-77 (d) ..	5 527 309	10 750 124	1 945	18.3	13.8	1 877	18.4	14.6
1977-78 .....	5 568 298	11 112 862	1 996	2.6	9.5	1 953	4.0	9.8
1978-79 .....	5 538 181	12 272 304	2 216	11.0	8.2	2 143	9.7	7.8

- (a) Over the previous year for the all groups weighted average of the six state capital cities index.
- (b) Over the previous year for the all groups Hobart index.
- (c) Over the previous year.
- (d) Tax indexation was introduced from 1 July 1976.

It is noted that in the 1980-81 Federal Budget Statement No. 1, it was estimated that net collections of income tax from individuals in 1980-81 would increase by 13.5 per cent to \$17 070 million.

The next table shows actual personal income tax receipts by the Federal Government and wages and salaries paid in Australia for recent years:

## Personal Income Tax Receipts and Wages and Salaries Paid: Australia

Year	Personal income tax receipts (a)		Wages and salaries paid (b)		Index of tax receipts to wages and salaries paid (c) r	
	Amount	Increase (d)	Amount r	Increase (d)		
	\$ million	per cent	\$ million	per cent	Index number	Increase (d) per cent
1973-74 .....	5 485	34.3	26 893	r 22.1	20.40	10.0
1974-75 .....	7 709	40.5	34 469	r 28.2	22.37	9.7
1975-76 .....	9 213	19.5	39 527	14.7	r 23.31	4.2
1976-77 (e) .....	11 047	19.9	44 590	r 12.8	24.77	6.3
1977-78 .....	12 122	9.7	48 852	r 9.6	24.81	0.2
1978-79 .....	12 797	5.6	52 550	7.6	24.35	-1.9

(a) The item 'Income tax paid on household income' in the *Australian National Accounts* (Cat. No. 5204.0); consists of actual receipts less refunds during the year.

(b) *Australian National Accounts* (Cat. No. 5204.0) item; excludes payments to proprietors of unincorporated enterprises and supplements to wages and salaries.

(c) Personal income tax receipts expressed as a percentage of wages and salaries paid.

(d) Over the previous year.

(e) Tax indexation was introduced from 1 July 1976.

## TOURISM

*This section, apart from the 'Tourist Industry' and 'Tourist Accommodation Statistics', has been contributed by the Department of Tourism.*

## Introduction

Tasmania is unique among the Australian States because it is an island with relatively short distances separating population centres. The populated areas of the State are serviced by a main road network of a high standard and, in addition, the scenery and topography (see also the section 'Physiography' in Chapter 2) is fascinatingly varied. Without travelling for any great distance one can encounter long white beaches, coastal heaths and sand dunes, dense rain forests, rugged mountains, alpine moors and snow country, undulating hill country, fertile river valleys, numerous lakes and rivers, lush green pastures, orchards, convict ruins, many fine examples of early colonial architecture and extensive hydro-electric developments. Angling, bushwalking and caverneering are strong attractions for enthusiasts. As a result, tourism is of great importance to Tasmania and is vigorously promoted.

## Visitors to the State

During 1979-80 almost 590 000 paying passengers travelled to Tasmania, including about 250 000 returning Tasmanian residents. Over the past five years, monthly passenger arrivals have conformed to a marked seasonal pattern, distinguished by an accentuated trough in July, a major peak in January, and minor peaks in October and April.

Excluding returning Tasmanians, it is estimated that of the 340 000 visitors travelling to Tasmania each year, around 250 000 come purely for holiday purposes. The remainder, who visit the State for other reasons, often extend their stay by several days to enjoy Tasmania's tourist attractions.

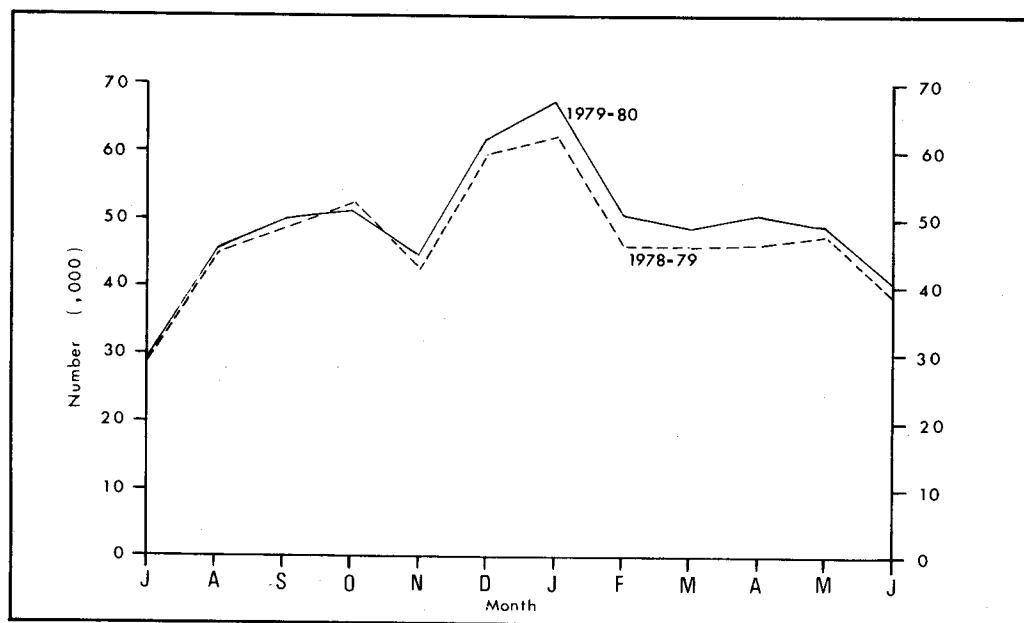
Approximately 63 per cent of visitors (around 215 000) enter Tasmania via the main northern points of entry—Wynyard, Devonport and Launceston. A popular form of holiday is to travel around the State via the north coast, east coast, Midlands, Derwent Valley and west coast highways. The next table shows passenger arrivals dissected by month and port of entry for 1979-80. (For details of recorded interstate arrivals and departures for recent years, see the section 'Interstate Arrivals and Departures' in Ch. 6.)

**Passenger Arrivals, Tasmania, 1979-80**  
(Source: Department of Tourism)

(Source: Department of Tourism)

Month	Port of entry								Total
	Hobart	Launceston	Wynyard	Devonport			King Is.	Flinders Is.	
				By air	By sea	Total			
July .....	14 127	8 831	2 538	2 162	1 110	3 272	359	27	29 154
August .....	18 686	16 069	3 384	3 360	3 865	7 225	513	37	45 914
September .....	20 394	14 628	4 054	3 990	5 645	9 635	492	38	49 241
October .....	22 989	15 803	3 931	3 215	4 722	7 937	605	29	51 294
November .....	17 372	15 826	3 210	3 029	4 979	8 008	398	40	44 854
December .....	22 676	20 901	3 264	5 603	6 309	11 912	598	79	61 430
January .....	25 440	24 538	5 028	6 004	5 275	11 279	739	134	67 158
February .....	21 262	17 049	3 363	3 866	4 840	8 706	482	67	50 929
March .....	18 252	17 115	3 233	3 288	6 336	9 624	375	48	48 647
April .....	19 506	18 055	3 910	3 908	4 578	8 486	445	95	50 497
May .....	19 796	16 154	3 741	3 511	5 191	8 702	573	79	49 045
June .....	18 318	12 051	3 680	3 638	2 823	6 461	457	24	40 991
Total .....	238 818	197 020	45 336	45 574	55 673	101 247	6 036	697	589 154

**Passenger Arrivals, Tasmania**



Almost all vehicle traffic and passenger sea traffic from the mainland to Tasmania is between Melbourne and Devonport on the Australian National Line's 'sea-road' service. The next table shows details of Bass Strait vehicle and passenger sea traffic from Melbourne to Devonport for 1979-80 by month.

**Bass Strait Vehicle and Passenger Sea Traffic: Melbourne to Devonport 1979-80**  
(Source: Department of Tourism)

Month	Motor vehicles	Caravans and trailers	Passengers
July .....	339	13	1 110
August .....	1 026	34	3 865
September .....	1 572	101	5 645
October .....	1 255	60	4 722
November .....	1 253	54	4 979
December .....	1 693	84	6 309
January .....	1 328	59	5 275
February .....	1 397	77	4 840
March .....	1 766	57	6 336
April .....	1 126	31	4 578
May .....	1 460	59	5 191
June .....	826	26	2 823
Total .....	15 041	655	55 673

*Campervans:* The use of campervans, hired on arrival in Tasmania, is growing in popularity with holiday visitors. At 30 June 1980, 269 campervans were licensed by the Transport Commission as hire and drive vehicles; 55 factory-new campervans were registered by the Commission during 1979-80 (31 for use as hire and drive vehicles and 24 for private use).

### Department of Tourism

The Department of Tourism is responsible for the development of Tasmania as a tourist destination. It pursues this objective through the provision of travel information, sales and marketing services for tourists, the provision of financial assistance for approved tourism development projects, the registration of all categories of commercial accommodation, regulation of the erection of certain types of road-side signs in non-urban areas and through research into specific aspects of Tasmania's tourist industry.

#### *Tourism Marketing*

The Department continues to expand its advertising, promotional and publicity activities. In 1979-80 direct expenditure on these activities amounted to \$900 000, an increase of 5.9 per cent over the expenditure of \$849 990 in the previous year. National campaigns conducted in spring and autumn incurred an expenditure of about \$520 000.

The sales arm of the Department consists of the Tasmanian Government Tourist Bureaux which are located at Hobart, Launceston, Devonport, Burnie, Queenstown, Melbourne, Canberra, Sydney, Brisbane, Adelaide and Perth. These bureaux display promotional material relating to Tasmania, disseminate Tasmanian tourist information, answer specific inquiries, organise and sell package tours within the State, and assist and act as agents for other travel organisations which provide tourist services to and within Tasmania. In turn, the bureaux are represented throughout Australia, in New Zealand and in Papua New Guinea, by some 870 accredited travel offices.

During 1979-80, the sales receipts of all bureaux amounted to \$22 869 223, of which 65 per cent was generated outside Tasmania. This represents an increase of 3.2 per cent on receipts of \$22 151 333 for the previous year. Receipts of the mainland bureaux increased by \$374 054 compared with an increase of \$343 836 in receipts of the Tasmanian bureaux.

The Department also promotes capital investment in tourist accommodation, transport and facilities by providing loans, guarantees and grants for approved projects. During 1979-80, the Minister for Tourism approved six loans totalling \$506 305 for tourist projects and guarantees totalling \$150 000. In addition, 67 grants to a value of over \$628 895 were made to municipal councils, sporting bodies and other organisations for tourism promotional activities and development projects throughout the State, including grants totalling \$60 867 advanced for the development of caravan parks at Port Cygnet, George Town, Kentish and Circular Head.

### *Accommodation Standards*

Under Section 16 of the *Tourism Act 1977*, the Department of Tourism is responsible for the registration of accommodation houses which can be classified as motels, guest houses, hostels, holiday flats, holiday cabins, camping grounds, caravan parks and tourist caravan parks. Such premises are required to conform to minimum standards of quality relating to health and hygiene, safety and comfort. During 1979-80, 66 inquiries were received regarding proposals for the establishment of new premises. The Department received 32 complaints against registerable premises, and a total of 412 inspections were made.

At 30 June 1980, there were 268 registerable accommodation houses in Tasmania (excluding hotels), of which 53 were granted full or provisional registration or exemption from registration by the Department of Tourism during 1979-80. (Statistics relating to 'tourist accommodation establishments' are including in a later section.)

Eighty-five caravan parks and camping grounds throughout the State are registered with the Department, providing accommodation for 11 089 people. Most provide communal washing and toilet facilities, and showers. More than half are owned and operated by municipal councils.

### **The Tasmanian Tourist Council**

The Tasmanian Tourist Council represents the private sector of the tourist industry, and its extensive State-wide membership is drawn from businesses and organisations both directly and indirectly involved in tourism. It is acknowledged by the State Government to be the voice of private enterprise, and as such works closely with the Department of Tourism in the development of Tasmania's visitor industry.

Regional tourism interests have the opportunity to co-ordinate their activities through the various Divisions of the Council, and each Division is represented on the Council's Board of Management. The Board of Management also includes representation from industry, affiliated associations and various tourism orientated State Government departments.

In its publishing role, the Council produces annually the *Official Visitors Guide to Tasmania*, and the widely accepted *Let's Talk About* series of publications.

In 1976 the Council held its first annual tourism seminar at Devonport. This event is now firmly established on the tourist industry calendar, and is conducted each year at different venues around the State. As well as providing an educational forum for the tourist industry, these seminars also involve the local community and serve to demonstrate the benefits that tourism can contribute to the local economy and life-style.

### **The 'Tourist Industry'**

In terms of the *industrial* structure of the economy there is no identifiable sector which can be regarded as the 'tourist industry'. The difficulty is that the provision of goods and services for tourists cannot generally be distinguished from the provision of goods and services for residents. Receipts from tourists for goods and services purchased contribute in varying degrees to the total receipts of a wide range of businesses. Tourists might, for example, be expected to use the services of the insurance industry or to purchase furniture to only a very limited extent whereas, at the other end of the scale, they would be major users of the services provided by the accommodation industry.

Rather than attempt to delineate a separate 'tourist industry' it is therefore much more meaningful to examine the 'tourist impact' on industries within the accepted industrial structure.

Probably the most effective way of measuring tourist impact is to interview suitable samples of tourists and ascertain the pattern and scale of their expenditures while on tour. From these data, estimates can be made of total tourist impact on the purchases of goods and services. The Department of Tourism, with assistance from the Bureau, conducted a survey of air and sea passengers departing from the State during 1978. The preliminary results from this survey are summarised in the 1980 *Year Book* (pp. 532-537).

A major part of tourist expenditure is on accommodation. Hence information obtained from establishments which provide accommodation for tourists will reflect tourist impact. It



will, of course, also include expenditure by residents (e.g. public bar trade of licensed hotels). The next section contains statistics relating to Tasmanian accommodation establishments. (See also the section 'The Licensing Board' in Chapter 16.)

### Tourist Accommodation Statistics

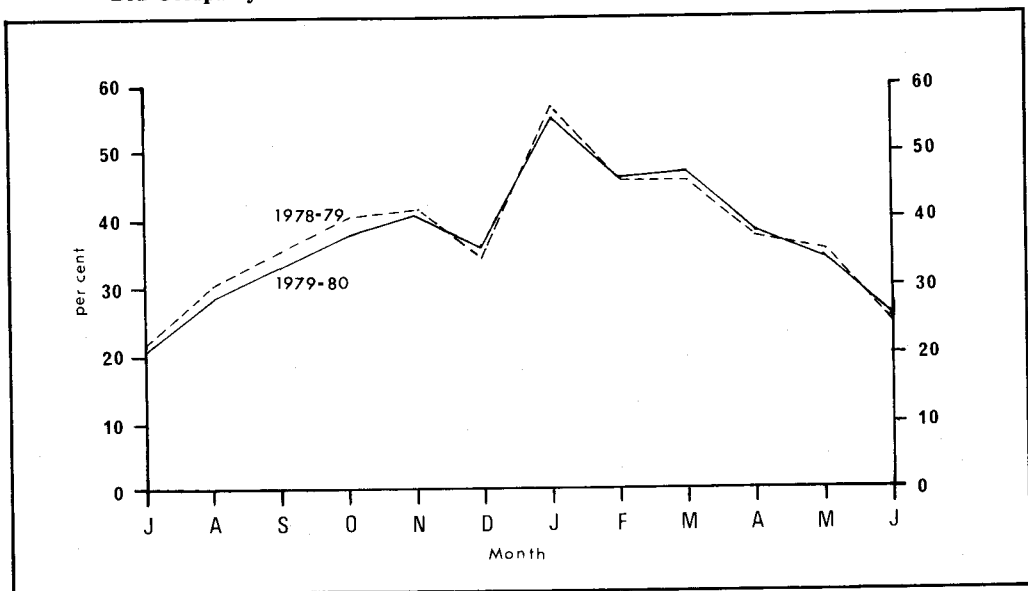
#### Census, 1973-74

Covering operations in the year 1973-74, the Bureau conducted its first census of tourist accommodation establishments which were defined as those which catered predominantly for short-term guests. The aim was to obtain a broad picture of this accommodation sector in the census year and also to provide the framework for subsequent tourist accommodation surveys. Details of the results of the 1973-74 Census are contained in Chapter 18 of the 1977 *Year Book*.

#### Survey of Tourist Accommodation

Since the census of 1973-74, a survey of tourist accommodation has been conducted by the Bureau each quarter. Statistics are obtained in respect of each month in a particular quarter. The scope of the current survey is the same as that for the 1973-74 Census except for the omission of holiday flats.

**Bed Occupancy Rates: Accommodation Establishments with Facilities (a), Tasmania**



(a) Hotels, motels, etc. which provide a bath or shower, and a toilet in most guest rooms

The following definitions apply:

**Licensed Hotel with Facilities:** A tourist accommodation establishment which is licensed to operate a public bar, provides bath or shower and toilet in most guest rooms, and has breakfast available for guests.

**Licensed or Unlicensed Motel, Private Hotel or Guest House with Facilities:** A tourist accommodation establishment which provides bath or shower and toilet in most guest rooms and has breakfast available for guests, but is not licensed to operate a public bar. This category also includes motels that are licensed to serve liquor with meals.

**Caravan Park:** A tourist accommodation establishment which provides powered sites for caravans, and toilet, shower and laundry facilities for guests.

**Tourist Accommodation Establishment:** There is no generally accepted definition of a tourist accommodation establishment but, for the purpose of the surveys, a tourist accommodation establishment has been defined as an establishment which provides

accommodation of a predominately short term nature (i.e. for periods of less than two months) available to the general public. Note that data are collected and published for both long term and short term guests at these establishments.

The following table includes details from the survey for 1979-80 and recent years:

**Hotels and Motels, etc. and Caravan Parks: Number, Capacity, Occupancy rates, and Takings from Accommodation, Tasmania**

Month	Hotels and motels, etc. with facilities (a)				Caravan parks (b)			
	Number of establishments	Capacity number of guest rooms	Room occupancy rates (per cent)	Takings from accommodation (\$'000)	Number of establishments	Capacity number of sites and cabins	Site occupancy rates (per cent)	Takings from accommodation (\$'000)
Jan.—1976	(c) 118	(c) 3 371	72.8	1 536	n.a.	n.a.	n.a.	n.a.
1977	(c) 121	(c) 3 485	71.1	1 750	n.a.	n.a.	n.a.	n.a.
1978	(c) 122	(c) 3 623	73.2	2 054	(c) 47	(c) 3 838	52.5	205
1979	(c) 124	(c) 3 672	74.4	2 304	(c) 51	(c) 4 340	55.2	281
1979—April	n.a.	n.a.	55.4	1 657	n.a.	n.a.	20.6	118
May	n.a.	n.a.	51.8	1 586	n.a.	n.a.	16.4	101
June	124	3 666	39.0	1 127	52	4 485	13.2	72
July	n.a.	n.a.	35.6	955	n.a.	n.a.	10.0	55
Aug.	n.a.	n.a.	43.5	1 290	n.a.	n.a.	12.5	76
Sept.	124	3 677	48.6	1 455	53	4 579	14.1	90
Oct.	n.a.	n.a.	57.8	1 840	n.a.	n.a.	13.1	94
Nov.	n.a.	n.a.	60.5	1 848	n.a.	n.a.	18.2	120
Dec.	126	3 746	49.1	1 665	54	4 622	27.4	165
1980—Jan.	n.a.	n.a.	72.7	2 550	n.a.	n.a.	51.7	322
Feb.	n.a.	n.a.	68.3	2 234	n.a.	n.a.	34.6	222
Mar.	126	3 763	70.4	2 412	53	4 600	23.1	161
April	n.a.	n.a.	57.4	1 980	n.a.	n.a.	22.7	139
May	n.a.	n.a.	51.5	1 801	n.a.	n.a.	16.5	105
June	130	3 836	39.5	1 305	53	4 616	16.2	99

(a) *Hotels and motels, etc. with facilities*—tourist accommodation establishments which provide bath or shower and toilet in most guest rooms and have breakfast available for guests.

(b) *Caravan Park*—A tourist accommodation establishment which provides powered sites for caravans and toilet, shower and laundry facilities.

(c) Number of establishments and accommodation capacity data are as at the end of March, *not* January.

### Further References

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## Appendix A

### STATISTICAL SUMMARY

In the next 29 pages, an historical summary of the more important statistics available that relate to Tasmania is shown. Only brief footnotes have been included and readers should refer to the relevant chapter of the *Year Book* for more detailed definitions. Naturally, the range of statistics for early years is very limited. Also, it should be borne in mind that perfect comparability over long periods of time is difficult to attain due to changes in definitions, scope of statistical collections, etc. While major breaks in series are shown, minor changes to series are not indicated and the statistics should be interpreted with this in mind.

Generally, the first year shown on each page is the earliest for which any series on that page is available. Due to space constraints, earlier details for some series are given only for either every five or ten years. Items included have been arranged in chapter order.

(Chapter 4)

#### Local Government Finance, Tasmania

Year	Value of ratable property			Revenue Fund— ordinary services and business undertakings		Loan Fund			
	Land value (a) (b) (c)	Total capital value (a) (b)	Assessed annual value	Revenue (d)	Expendi- ture (d)	Loan raisings	Expendi- ture	Total debt (b)	Annual interest liability
	\$ million	\$ million	\$ million	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
1929-30 .....	46-17	101-40	5-51	1 954	1 956	227	212	6 502	n.a.
1939-40 .....	46-16	109-82	6-10	2 174	2 192	212	230	6 712	300
1949-50 .....	50-73	134-70	9-02	3 694	3 696	1 400	1 423	7 219	267
1950-51 .....	55-86	155-35	10-24	4 283	4 327	1 860	1 594	8 534	304
1951-52 .....	63-43	187-66	11-43	5 357	5 351	2 554	2 558	10 453	372
1952-53 .....	69-93	224-91	12-87	6 024	6 048	2 184	2 166	11 900	444
1953-54 .....	74-31	252-69	13-84	6 641	6 506	2 418	1 758	13 600	533
1954-55 .....	83-58	296-37	15-88	6 972	7 053	2 796	2 408	15 603	639
1955-56 .....	93-84	345-27	15-56	6 386	6 596	2 367	2 730	(e) 15 389	654
1956-57 .....	130-13	495-31	25-42	7 417	7 261	2 310	2 682	16 967	761
1957-58 .....	140-55	553-90	28-23	7 998	7 904	4 024	3 237	20 192	944
1958-59 .....	164-66	653-48	33-41	8 837	8 837	3 685	3 541	22 979	1 111
1959-60 .....	179-03	739-35	37-31	9 781	9 762	5 232	4 671	27 144	1 337
1960-61 .....	185-93	808-21	40-04	10 867	10 924	5 277	5 259	31 285	1 571
1961-62 .....	193-52	870-08	42-89	12 097	11 779	6 159	5 658	36 181	(f) 1 515
1962-63 .....	216-01	942-88	48-62	13 765	13 256	5 268	7 212	39 842	1 897
1963-64 .....	271-83	1 075-09	57-51	14 792	14 654	5 823	7 431	44 063	2 061
1964-65 .....	290-52	1 140-40	61-27	16 250	16 176	6 237	6 354	48 368	2 209
1965-66 .....	316-91	1 202-22	68-54	17 395	17 085	6 512	8 342	52 844	2 442
1966-67 .....	328-50	1 271-87	72-47	19 594	19 068	6 981	8 091	57 611	2 893
1967-68 .....	350-81	1 350-44	86-35	21 235	20 858	8 183	9 364	62 821	3 186
1968-69 .....	374-49	1 452-38	95-57	23 478	22 790	7 633	8 616	66 922	3 496
1969-70 .....	411-72	1 571-96	102-98	25 914	24 816	6 793	7 972	71 854	3 858
1970-71 .....	441-88	1 691-37	107-78	28 236	27 195	6 964	7 494	75 752	4 149
1971-72 .....	454-47	1 768-07	114-86	31 505	30 985	7 326	8 504	79 907	4 534
1972-73 .....	483-44	1 874-17	124-61	37 000	34 552	8 151	9 668	84 781	4 865
1973-74 .....	511-39	1 995-91	147-41	40 376	r 38 381	8 574	8 803	89 766	5 298
1974-75 .....	619-19	2 317-03	165-47	52 313	r 51 830	12 260	12 677	97 892	5 951
1975-76 .....	<u>696-26</u>	2 570-15	185-36	68 345	r 65 118	15 870	19 368	109 655	7 071
1976-77 .....	763-67	2 902-51	218-86	r 76 376	r 69 204	17 775	20 579	122 950	8 655
1977-78 .....	1 155-61	3 531-99	260-11	r 82 607	r 77 476	18 595	23 135	136 366	10 283
1978-79 .....	1 401-17	4 241-72	344-62	92 130	86 286	19 872	24 120	149 934	12 017

(a) State Government valuation.

(b) At 30 June.

(c) Prior to 1977-78 figures are 'unimproved capital value'.

(d) Excludes loans.

(e) As from 1955-56, the loan debt of Hobart and Launceston Corporations for tramways has been excluded and treated as a direct liability of the Metropolitan Transport Trust.

(f) From 1961-62 actual interest payments.

(Chapter 5)

Consolidated Revenue Fund: Revenue and Expenditure, Tasmania (a)  
(\$'000)

Year	Revenue	Expenditure	Budget result	Aggregate net deficit at end of year
1891	1 889	1 827	+63	497
1901	1 652	1 741	-89	487
1910-11	1 940	2 034	-94	490
1911-12	2 169	2 129	+40	450
1912-13 (b)	2 413	2 192	+221	229
1913-14	2 476	2 470	+6	223
1914-15	2 488	2 768	-280	503
1915-16	2 753	2 681	+72	432
1916-17	2 739	2 826	-87	519
1917-18	3 006	2 919	+87	432
1918-19	3 164	3 289	-125	557
1919-20	3 630	3 657	-27	584
1929-30	5 379	5 430	-51	1 451
1930-31	5 219	5 709	-490	1 942
1931-32	4 771	5 314	-543	2 485
1932-33	5 044	5 155	-110	2 596
1933-34	5 396	5 492	-95	2 691
1934-35	5 744	5 983	-238	2 930
1935-36	6 235	6 495	-259	3 189
1936-37	6 977	6 887	+90	3 099
1937-38	7 280	7 266	+14	3 086
1938-39	7 230	7 281	-52	3 138
1939-40	6 111	6 106	+5	3 133
1940-41	5 843	6 206	-363	3 496
1941-42	6 717	6 714	+3	3 493
1942-43	6 581	6 800	-219	3 712
1943-44	6 997	6 937	+60	3 651
1944-45	7 313	7 351	-38	3 690
1945-46	7 867	8 068	-201	3 891
1946-47	9 014	9 147	-132	4 023
1947-48	10 156	10 204	-48	4 071
1948-49	11 288	11 691	-402	4 473
1949-50	13 882	14 165	-283	4 756
1950-51	15 831	16 324	-493	5 249
1951-52	20 386	21 490	-1 104	6 353
1952-53	22 922	23 526	-604	6 957
1953-54	26 502	26 840	-338	7 294
1954-55	29 877	30 614	-737	8 032
1955-56	34 389	35 792	-1 403	9 434
1956-57	37 889	39 543	-1 655	11 089
1957-58	43 210	43 228	-18	11 107
1958-59	45 520	45 518	+2	11 105
1959-60	50 542	50 657	-114	11 219
1960-61	54 054	54 167	-113	11 332
1961-62	61 191	61 352	-161	11 493
1962-63	64 018	64 019	-1	11 493
1963-64	69 167	69 021	+147	11 346
1964-65	76 012	76 465	-452	11 799
1965-66	84 453	85 585	-1 132	12 931
1966-67	91 486	93 248	-1 762	14 693
1967-68	100 463	102 413	-1 951	16 644
1968-69	109 526	111 540	-2 015	18 659
1969-70	120 619	121 004	-385	19 044
1970-71	135 829	138 207	-2 378	21 422
1971-72	156 432	160 237	-3 805	25 226
1972-73	181 866	185 998	-4 132	29 358
1973-74	206 947	210 097	-3 150	32 508
1974-75	268 522	282 065	-13 544	46 052
1975-76	322 091	317 947	+4 144	41 908
1976-77	396 617	395 033	+1 583	41 908
1977-78	444 263	450 706	-6 443	43 158
1978-79	495 822	492 961	+2 861	n.y.a.

(a) From 1947-48 until 1971-72, the items 'Revenue' and 'Budget result' are shown adjusted according to the Special Grant Adjustment.  
 (b) System of annual Commonwealth Special Grants introduced.

(Chapter 5)

## Aggregate Net Loan Expenditure and Public Debt, Tasmania

Year	Aggregate net loan expenditure to end of year							Public debt at end of year (a) (at mint par of exchange)	Annual interest liability at current rates of exchange	
	Purpose								Amount	Average rate
	Railways and transport	Hydro-electric works	Roads, bridges, harbours	School buildings and University	Housing advances and construction	Other	Total			
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	%
1890.....	6 508	-	3 354	238	-	2 282	12 382	12 866		
1900.....	7 820	-	5 352	334	-	2 986	16 492	17 022		
1910-11.....	8 866	-	7 258	488	-	5 034	21 646	22 156	n.a.	n.a.
1920-21.....	11 702	3 994	10 390	848	206	12 302	39 442	37 552		
1930-31.....	13 866	7 692	13 540	1 312	412	16 568	53 390	46 778		
1940-41.....	14 520	13 018	14 412	1 986	902	19 392	64 230	56 332		
1950-51.....	20 958	40 448	16 214	4 694	9 946	33 468	125 728	114 066	n.a.	3.1977
1960-61.....	31 126	181 578	35 076	27 266	29 536	87 422	392 004	354 558	n.a.	4.3845
1961-62.....	31 418	195 206	39 144	30 450	29 190	96 684	422 092	379 252	17 064	4.3948
1962-63.....	31 296	208 706	42 942	34 048	28 990	106 621	452 603	404 594	19 523	4.4585
1963-64.....	34 410	222 905	47 704	38 342	28 577	113 570	485 508	432 311	19 790	4.4634
1964-65.....	34 984	239 419	51 171	42 395	28 244	122 653	518 866	462 302	21 706	4.5890
1965-66.....	35 789	255 919	55 593	46 832	27 970	133 325	555 428	491 658	23 987	4.7693
1966-67.....	36 088	273 919	57 486	50 858	27 692	146 021	592 064	524 918	25 940	4.8432
1967-68.....	36 910	293 919	58 774	54 964	27 217	162 408	634 192	560 893	27 777	4.8879
1968-69.....	37 170	314 644	59 563	59 387	27 230	176 586	674 580	599 736	30 040	4.9517
1969-70.....	40 503	337 769	60 686	64 853	26 469	189 370	719 650	637 407	32 939	5.1163
1970-71.....	42 169	362 269	61 706	70 544	26 104	204 250	767 042	665 397	36 203	5.3928
1971-72.....	47 199	388 269	62 636	78 952	31 497	224 757	833 310	705 271	39 202	5.5220
1972-73.....	58 643	410 629	63 176	90 753	36 837	240 516	900 554	749 583	41 620	5.5300
1973-74.....	67 609	433 629	63 886	102 567	36 228	261 248	965 167	787 618	45 922	5.8300
1974-75.....	81 033	456 854	64 504	114 219	35 771	288 832	1 041 213	833 862	49 005	6.4100
1975-76.....	(b) 15 186	486 554	65 559	132 917	37 475	316 692	1 054 383	753 797	53 748	7.1300
1976-77.....	13 714	517 554	71 407	156 939	40 694	370 933	1 164 561	811 012	60 437	7.4500
1977-78.....	14 730	540 554	75 526	178 496	42 558	417 616	1 269 481	870 097	68 233	7.8400
1978-79.....	15 466	557 204	80 526	197 373	48 754	469 324	1 368 648	922 559	73 604	7.9783

(a) Expenditure under Commonwealth and State Housing Agreements is excluded from Public Debt.

(b) The Tasmanian Government Railways were taken over by the Australian National Railways Commission from 1 July 1975.

(Chapter 5)

## Gross and Net Loan Expenditure, Tasmania

Year	Gross expenditure	Net expenditure	Revenue deficit funded (a)	Net Loan expenditure per head of population	Year	Gross expenditure	Net expenditure	Revenue deficit funded (a)	Net loan expenditure per head of population
	\$'000	\$'000	\$'000	\$		\$'000	\$'000	\$'000	\$
1900 to 1904-05 (b)	543	473	-	2.68	1947-48	8 361	6 528	132	24.98
1905-06 to 1909-10 (b)	571	519	-	2.78	1948-49	11 051	9 013	488	33.82
1910-11 to 1914-15 (b)	1 147	1 039	-	5.40	1949-50	11 742	9 884	48	36.02
1915-16 to 1919-20 (b)	2 004	1 549	-	7.84					
1920-21.....	6 181	5 435	-	25.68	1950-51.....	30 802	27 465	402	96.86
1921-22.....	5 377	4 292	-	19.98	1951-52.....	34 047	30 047	283	103.28
1922-23.....	3 422	2 307	699	10.68	1952-53.....	40 152	26 137	493	86.38
1923-24.....	2 752	1 492	-	6.88	1953-54.....	31 816	27 544	1 104	89.00
1924-25.....	1 907	496	-	2.30	1954-55.....	35 310	29 378	604	93.96
1925-26.....	2 226	1 138	-	2.30	1955-56.....	35 213	27 048	338	84.98
1926-27.....	2 290	659	-	5.30	1956-57.....	23 544	22 039	737	67.88
1927-28.....	2 068	809	-	3.08	1957-58.....	23 390	21 666	1 403	33.26
1928-29.....	2 059	698	-	3.78	1958-59.....	27 610	25 112	1 655	74.16
1929-30.....	2 932	294	-	3.22	1959-60.....	29 130	26 443	18	76.84
				1.34					
1930-31.....	(c) 2 921	(c) 1 651	-	7.40	1960-61.....	33 865	30 611	-	87.38
1931-32.....	1 319	193	-	0.86	1961-62.....	32 521	30 088	112	84.60
1932-33.....	887	-147	-	0.86	1962-63.....	33 332	30 511	113	84.58
1933-34.....	1 050	238	-	-0.64	1963-64.....	35 354	32 905	161	90.32
1934-35.....	1 572	723	-	1.04	1964-65.....	35 816	33 352	-	90.65
1935-36.....	3 717	2 000	678	3.16	1965-66.....	39 411	36 573	-	98.46
1936-37.....	3 996	1 684	-	8.66	1966-67.....	40 161	36 636	306	98.15
1937-38.....	3 785	1 701	-	7.00	1967-68.....	46 054	42 128	1 132	111.62
1938-39.....	3 699	1 479	-	7.32	1968-69.....	44 458	40 164	1 762	105.02
1939-40.....	3 628	1 806	-	6.22	1969-70.....	49 411	45 069	-	116.67
				7.52					
1940-41.....	4 231	2 268	363	9.40	1970-71.....	52 079	47 393	-	121.75
1941-42.....	3 581	1 430	-	5.96	1971-72.....	73 037	66 268	4 350	169.22
1942-43.....	3 001	1 002	-	4.14	1972-73.....	76 813	67 243	2 378	170.67
1943-44.....	5 218	3 350	219	13.70	1973-74.....	73 947	64 603	3 805	162.60
1944-45.....	3 587	1 806	910	7.32	1974-75.....	90 060	76 056	7 282	189.15
1945-46.....	3 540	1 590	-	6.36	1975-76.....	98 818	81 369	-	200.32
1946-47.....	5 899	2 725	239	10.70	1976-77.....	126 223	110 178	9 400	269.31
					1977-78.....	123 459	104 920	-	254.60
					1978-79.....	122 544	99 167	1 250	238.67

(a) These amounts are included in both Gross and Net Loan Expenditure. The figures shown are a complete record of funded deficits since 1900.

(b) Annual average for the five-yearly period shown.

(c) Includes \$1 233 000, the amount re-appropriated to provide for certain deferred revenue charges.

(Chapter 6)

## Summary of Population at Census Dates, Tasmania (a) (b)

Particulars	Census Date							
	April 1921	June 1933	June 1947	June 1954	June 1961	June 1966	June 1971	June 1976
Population—								
Males .....	no. 107 743	115 097	129 244	157 129	177 628	187 390	196 442	201 512
Females .....	no. 106 037	112 502	127 834	151 623	172 712	184 045	193 971	201 356
Persons .....	no. 213 780	227 599	257 078	308 752	350 340	371 435	390 413	402 868
Masculinity (males per 100 females) .....	no. 102	102	101	104	103	102	101	100
Average annual increase since previous Census—								
Males .....	% 1.0	0.6	0.8	2.8	1.8	1.1	1.0	0.5
Females .....	% 1.3	0.5	0.9	2.5	1.9	1.3	1.0	0.8
Persons .....	% 1.1	0.5	0.9	2.7	1.8	1.2	1.0	0.6
Age distribution of population—								
Under 16 years .....	no. 77 654	73 030	77 483	102 171	123 331	127 379	129 307	124 267
% .....	36.3	32.1	30.1	33.1	35.2	34.3	33.1	30.8
16 years and under 65 years .....	no. 126 055	138 515	159 925	183 230	200 001	214 981	230 069	243 885
% .....	59.0	60.9	62.2	59.3	57.1	57.9	58.9	60.5
65 years and over .....	no. 10 071	16 054	19 670	23 351	27 008	29 075	31 037	34 719
% .....	4.7	7.0	7.7	7.6	7.7	7.8	7.9	8.6
Religions of the population—								
Church of England .....	no. 112 222	105 228	123 158	147 407	159 101	166 023	169 089	158 749
Methodist .....	no. 27 171	26 470	33 358	38 236	42 236	43 084	42 173	37 107
Catholic (c) .....	no. 35 465	33 189	39 844	53 042	63 993	71 089	77 250	75 092
Presbyterian .....	no. 14 796	13 194	12 644	15 607	16 757	17 498	17 281	14 899
Baptist .....	no. 5 332	4 666	5 374	6 293	7 227	7 759	8 039	7 940
Congregational .....	no. 4 543	3 963	4 007	4 425	4 193	4 530	4 134	3 266
Churches of Christ .....	no. 1 935	1 892	2 039	2 267	2 507	2 701	2 500	2 188
Protestant (Undefined) .....	no. 2 271	1 979	1 661	2 157	1 975	1 924	4 243	3 455
Salvation Army .....	no. 1 357	1 142	1 612	1 815	2 316	2 661	3 176	2 880
Other Christian .....	no. 3 597	3 530	4 518	8 238	11 229	13 058	16 510	18 667
Total Christian .....	no. 208 689	195 253	228 215	279 487	311 534	330 327	344 395	324 244
Non-Christian .....	no. 245	87	173	256	268	485	561	779
Indefinite .....	no. 520	373	797	796	1 766	2 275	993	2 223
No Religion .....	no. 399	159	506	516	775	2 020	44 464	27 625
No Reply .....	no. 3 927	31 727	27 387	27 697	35 997	36 328		47 998
Conjugal condition of the population—								
Never married—								
Under 15 years of age .....	no. 73 444	68 590	73 371	97 452	117 299	120 164	121 323	115 665
15 years of age and over .....	no. 54 297	61 009	53 912	54 890	58 039	64 365	65 213	70 229
Total never married .....	no. 127 741	129 599	127 283	152 342	175 338	184 529	186 536	185 894
Married .....	no. 76 482	86 014	114 625	139 801	157 110	167 421	181 855	185 056
Widowed .....	no. 8 874	10 954	12 933	14 030	15 563	16 959	18 621	19 340
Divorced .....	no. 118	416	1 319	2 002	2 329	2 526	3 401	5 868
Not stated .....	no. 565	616	918	577	(d)	(d)	(d)	(d)
Birthplaces of the population—								
Australia .....	no. 196 268	215 213	247 379	282 491	317 478	335 582	350 150	361 866
New Zealand .....	no. 1 356	1 201	1 030	1 112	1 128	1 237	1 550	1 801
United Kingdom and Republic of								
Ireland .....	no. 12 734	9 588	7 123	14 113	16 741	19 101	22 513	22 913
Netherlands .....	no. 9	11	13	2 340	3 556	3 367	3 183	2 916
Germany .....	no. 389	238	171	1 794	2 223	2 016	2 009	1 886
Italy .....	no. 37	92	64	974	1 536	1 448	1 485	1 423
Other European .....	no. 512	334	325	4 535	5 789	6 033	6 184	5 970
Other birthplaces .....	no. 2 475	922	973	1 393	1 889	2 651	3 339	4 095

(a) Full-blood aboriginals excluded from census data prior to 1971.

(b) As recorded. Not adjusted for under-enumeration.

(c) Includes Catholic and Roman Catholic.

(d) Conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

(Chapter 6)

## Population; Arrivals and Departures, Tasmania

Year	Estimated Population (a)							Arrivals	Departures (c)	Annual Rate of Increase of Population (d)
	Total at 30 June	Mean: year ended 30 June	Mean: year ended 31 Dec.	Totals at 31 December						
				Persons	Males	Females	Masculinity (b)			
	no.	no.	no.	no.	no.	no.	no.	no.	no.	per cent
1820	n.a.	n.a.	n.a.	5 400	n.a.	n.a.	n.a.	n.a.	n.a.	-
1825	n.a.	n.a.	n.a.	14 192	10 979	3 213	342	n.a.	n.a.	21.26
1830	n.a.	n.a.	n.a.	24 279	18 108	6 171	293	n.a.	n.a.	11.35
1835	n.a.	n.a.	n.a.	40 172	28 749	11 423	252	n.a.	n.a.	10.59
1840	n.a.	n.a.	n.a.	45 999	32 040	13 959	230	n.a.	n.a.	2.75
1845	n.a.	n.a.	n.a.	64 291	43 921	20 370	216	n.a.	n.a.	6.91
1850	n.a.	n.a.	n.a.	68 870	44 229	24 641	179	n.a.	n.a.	1.37
1855	n.a.	n.a.	n.a.	69 962	38 680	31 282	124	n.a.	n.a.	0.32
1860	n.a.	n.a.	88 752	89 821	49 653	40 168	124	3 432	2 782	5.12
1865	n.a.	n.a.	93 111	93 967	50 549	43 418	116	3 597	3 691	0.90
1870 (e)	n.a.	n.a.	100 038	100 886	53 517	47 369	113	5 982	5 936	1.44
1875	n.a.	n.a.	104 000	103 739	54 678	49 061	111	6 535	8 083	0.55
1880	n.a.	n.a.	113 648	114 790	60 568	54 222	112	10 411	10 034	2.02
1885	n.a.	n.a.	127 763	128 860	67 712	61 148	111	14 822	15 228	2.33
1890	n.a.	n.a.	143 224	144 787	76 453	68 334	112	29 517	29 086	2.38
1895	n.a.	n.a.	153 701	154 895	80 485	74 410	108	18 767	19 357	1.35
1900	n.a.	n.a.	172 631	172 900	89 763	83 137	108	23 056	25 479	2.21
1905	183 351	183 834	184 478	186 385	95 947	90 438	106	31 116	33 311	1.52
1910	189 807	190 792	191 005	193 803	98 866	94 937	104	35 377	38 159	0.79
1915	195 370	196 320	196 238	197 536	98 653	98 883	100	39 767	44 764	0.38
1920	209 425	208 599	210 350	212 752	107 259	105 493	102	34 829	35 648	1.37
1925	213 991	215 997	215 552	219 364	110 172	109 192	101	40 227	43 757	0.70
1930	219 983	219 269	220 933	225 297	113 505	111 792	102	40 291	41 110	0.48
1935	228 988	229 339	229 867	233 423	118 124	115 299	102	42 470	42 912	0.63
1936	230 104	230 689	231 426	235 773	119 038	116 735	102	49 478	49 452	1.01
1937	233 203	232 651	234 463	239 570	121 136	118 434	102	52 514	51 468	1.61
1938	234 827	235 628	236 328	242 119	122 427	119 692	102	58 113	58 315	1.06
1939	237 419	237 637	238 845	243 256	123 194	120 062	103	(g) 59 330	(g) 60 893	0.47
1940	240 191	240 023	241 134	244 002	123 650	120 352	103	(g) 51 672	(g) 53 644	0.31
1941	239 677	241 009	240 389	242 135	122 153	119 982	102	(g) 49 348	(g) 53 865	-0.77
1942	240 913	240 358	241 087	242 437	122 440	119 997	102	(g) 42 463	(g) 44 834	0.13
1943	242 561	241 704	242 860	244 253	123 067	121 186	102	(g) 20 152	(g) 21 272	0.75
1944	245 616	244 178	245 618	246 889	124 293	122 596	101	n.a.	n.a.	1.08
1945	248 633	246 971	248 596	250 280	125 854	124 426	101	n.a.	n.a.	1.37
1946	251 998	250 309	252 192	254 570	128 007	126 563	101	(g) 24	(g) 159	1.71
1947 (e)	257 078	254 553	257 636	267 936	135 195	132 741	102	(g) 49 920	(g) 40 833	5.25
1948	261 206	261 202	263 445	273 401	138 843	134 558	103	112 666	110 490	2.04
1949	267 062	266 518	270 327	281 343	143 433	137 910	104	117 614	113 232	2.91
1950	275 902	274 493	278 785	290 333	147 103	143 230	103	127 709	122 333	3.20
1951	286 193	283 526	288 294	301 787	153 721	148 066	104	137 341	129 514	3.95
1952	296 299	293 340	298 361	309 558	157 702	151 856	104	130 583	126 979	2.57
1953	304 080	302 529	306 318	316 465	161 305	155 160	104	127 484	125 812	2.23
1954 (e)	308 752	309 416	311 055	319 218	162 393	156 825	104	126 976	128 424	0.87
1955	314 092	312 694	315 565	324 919	165 356	159 563	104	137 834	137 144	1.79
1956	318 470	318 309	321 039	331 340	168 695	162 645	103	143 104	141 686	1.98
1957	326 130	324 666	328 435	338 807	172 186	166 621	103	143 601	141 310	2.25
1958	333 066	332 046	335 382	343 898	174 465	169 433	103	141 814	141 995	1.50
1959	339 376	338 628	341 423	351 349	178 109	173 240	103	162 761	160 569	2.17
1960	343 910	344 111	346 913	355 969	180 511	175 458	103	182 537	183 513	1.31
1961 (e)	350 340	350 077	353 623	353 258	178 864	174 394	103	186 423	184 165	-0.76
1962	355 668	353 175	355 682	358 087	181 085	177 002	102	185 268	186 023	1.37
1963	360 727	358 180	360 590	362 799	183 330	179 469	102	198 443	199 918	1.32
1964	364 311	362 758	364 554	366 508	185 051	181 457	102	219 930	223 380	1.02
1965	367 905	366 366	367 970	369 608	186 483	183 125	102	248 964	249 617	0.85
1966 (e)	371 436	369 600	371 483	373 309	188 180	185 129	102	257 463	256 068	1.00
1967	375 244	373 321	375 397	377 841	190 369	187 472	102	270 934	271 812	1.21
1968	379 649	377 582	379 916	383 055	192 871	190 184	101	276 798	276 856	1.38
1969	384 893	382 710	385 079	386 998	194 788	192 210	101	296 186	297 069	1.03
1970	387 720	386 665	388 180	390 253	196 363	193 890	101	320 867	323 449	0.84
1971 (e) (f)	390 200	389 700	390 200	391 700	197 100	194 600	101	340 163	340 642	0.37
1972	392 200	391 600	392 400	394 000	198 000	196 000	101	356 561	355 224	0.59
1973	395 700	394 000	395 800	397 200	199 400	197 800	101	450 707	448 556	0.81
1974	399 300	397 300	399 600	402 500	201 700	200 800	100	508 449	502 488	1.32
1975	404 700	402 100	404 500	406 600	203 800	202 800	101	510 639	514 278	1.02
1976 (e) (f)	407 400	406 200	407 500	409 300	205 100	204 200	100	509 356	507 384	0.66
1977	410 600	409 100	410 600	412 100	206 300	205 800	100	538 665	530 535	0.69
1978	413 700	412 000	413 700	415 700	208 000	207 600	100	557 275	559 293	0.87
1979	417 700	415 500	417 800	420 000	210 000	210 000	100	576 050	574 790	0.96

(a) Prior to 1966 excludes Aborigines.

(b) Number of males per 100 females.

(c) Series of recorded interstate arrivals and departures prepared by State Department of Tourism replaces ABS series from 1972.

(d) The rate of increase during the previous 12 months or, in the years prior to 1936, the average (compound) rate of increase during the previous five years.

(e) Census year.

(f) Census results adjusted for under-enumeration.

(g) Excludes troop movements.





Mining Museum, Zeehan

*[Tasmanian Film Corporation]*

Timber wagon at the Bush Mill Logging Museum, Port Arthur







The Bowen Park Pyramids, Risdon Cove

*[Tasmanian Film Corporation]*

Sir William Crowther in the W. L. Crowther Library, State library of Tasmania, Hobart. This large research collection was donated by the late Sir William and named after his father.





(Chapter 6)

## Births, Deaths, Marriages and Divorces, Tasmania

Year	Number				Rate per 1 000 of mean population			Deaths under one year of age	
	Births	Deaths	Marriages	Divorces	Births	Deaths	Marriages	Number	Rate per 1 000 live births
	no.	no.	no.	no.					
1820	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1830	460	270	163	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1840	404	501	457	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1845	1 506	697	658	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1850	2 025	1 070	923	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1855	2 948	1 692	1 257	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1860	3 238	1 749	689	n.a.	36.48	19.71	7.76	n.a.	n.a.
1865	3 069	1 263	591	n.a.	32.96	13.56	6.35	n.a.	n.a.
1870	3 054	1 404	670	n.a.	30.53	14.03	6.70	298	97.6
1875	3 105	2 079	689	n.a.	29.86	19.99	6.83	407	131.1
1880	3 739	1 832	840	n.a.	32.90	16.12	7.39	420	112.3
1885	4 637	2 036	1 054	n.a.	36.29	15.94	8.25	522	112.6
1890	4 813	2 118	954	n.a.	33.60	14.79	6.66	508	105.6
1895	4 790	1 811	846	5	31.16	11.78	5.50	391	81.6
1900	4 864	1 903	1 332	4	28.18	11.02	7.72	389	80.0
1905	5 257	1 844	1 365	2	28.50	10.00	7.40	424	80.7
1910	5 586	2 120	1 493	6	29.25	11.10	7.82	568	101.7
1915	5 845	2 015	1 600	7	29.79	10.27	8.15	423	72.4
1920	5 740	2 036	1 999	18	27.29	9.68	9.50	376	65.5
1925	5 218	1 996	1 504	37	24.21	9.26	6.98	288	55.2
1930	4 786	1 948	1 450	42	21.66	8.82	6.56	242	50.6
1931	4 762	2 057	1 501	47	21.18	9.15	6.68	219	45.9
1932	4 491	2 022	1 508	33	19.78	8.90	6.64	185	41.2
1933	4 553	2 192	1 629	42	19.93	9.60	7.13	187	41.1
1934	4 470	2 345	1 678	60	19.50	10.23	7.32	189	42.3
1935	4 456	2 353	1 875	87	19.39	10.24	8.16	231	51.8
1936	4 581	2 387	2 073	62	19.79	10.31	8.96	227	49.6
1937	4 841	2 225	2 042	30	20.65	9.49	8.71	202	41.7
1938	4 907	2 288	2 082	109	20.76	9.68	8.81	195	39.7
1939	5 004	2 426	2 264	80	20.95	10.16	9.48	203	40.6
1940	4 994	2 387	2 476	83	20.71	9.90	10.27	176	35.2
1941	5 206	2 575	2 150	84	21.66	10.71	8.94	255	49.0
1942	5 305	2 430	2 431	83	22.00	10.08	10.08	255	42.4
1943	5 597	2 527	2 102	89	23.05	10.41	8.66	227	40.6
1944	5 200	2 494	1 935	115	21.17	10.15	7.88	199	38.3
1945	5 785	2 413	1 868	172	23.27	9.71	7.51	159	27.5
1946	6 847	2 549	2 650	219	27.15	10.11	10.51	207	30.2
1947	7 140	2 363	2 584	210	27.71	9.17	10.03	195	27.3
1948	6 979	2 528	2 428	185	26.49	9.60	9.22	193	27.7
1949	7 110	2 389	2 422	266	26.30	8.84	8.96	170	23.9
1950	7 242	2 466	2 560	152	25.96	8.85	9.18	172	23.8
1951	7 357	2 567	2 607	194	25.52	8.93	9.04	196	26.6
1952	7 916	2 579	2 553	217	26.53	8.64	8.56	172	21.7
1953	7 736	2 551	2 424	210	25.25	8.33	7.91	177	22.9
1954	7 770	2 696	2 512	238	24.98	8.67	8.08	186	23.9
1955	8 089	2 489	2 600	233	25.63	7.89	8.24	189	23.4
1956	8 104	2 513	2 601	197	25.24	7.83	8.10	170	21.0
1957	8 435	2 670	2 507	180	25.68	8.13	7.63	170	20.2
1958	8 568	2 708	2 475	176	25.55	8.07	7.38	167	19.5
1959	8 625	2 780	2 567	222	25.26	8.14	7.52	202	23.4
1960	8 853	2 670	2 713	210	25.52	7.70	7.82	169	19.1
1961	8 892	2 789	2 677	286	25.40	7.89	7.57	151	16.8
1962	8 894	2 870	2 485	249	25.01	8.07	6.99	184	20.7
1963	8 530	2 818	2 579	261	23.66	7.82	7.15	153	17.9
1964	8 252	3 174	2 869	230	22.64	8.71	7.87	166	20.1
1965	7 535	3 043	2 888	280	20.48	8.27	7.85	125	16.6
1966	7 401	3 159	2 946	319	19.92	8.50	7.93	108	14.6
1967	7 547	3 228	3 213	248	20.10	8.60	8.56	130	17.2
1968	8 317	3 284	3 426	303	21.89	8.64	9.02	143	17.2
1969	8 445	3 309	3 532	331	21.93	8.59	9.17	139	16.5
1970	8 185	3 174	3 535	426	21.09	8.16	9.11	116	14.2
1971	8 321	3 295	3 578	432	21.32	8.44	9.17	114	13.7
1972	7 824	3 227	3 426	446	19.94	8.22	8.73	127	16.2
1973	7 326	3 347	3 395	444	18.51	8.46	8.58	137	18.7
1974	7 398	3 484	3 567	536	18.52	8.72	8.93	123	16.6
1975	6 982	3 339	3 242	591	17.26	8.26	8.02	128	18.3
1976	6 702	3 389	3 477	1 761	16.44	8.32	8.53	77	11.5
1977	6 735	3 269	3 166	1 134	16.40	7.96	7.71	99	14.7
1978	6 788	3 271	3 148	r 1 132	16.41	r 8.00	7.61	97	14.3
1979	6 757	3 167	3 245	p 1 185	16.17	7.58	7.79	95	14.1

(Chapter 7)

Land Settlement: Land Utilisation, Tasmania  
(<sup>000</sup> ha)

Land settlement (a)					Land utilisation on rural establishments				
Year (b)	Land		Crown land		Year	Area under		Balance of area	Total area of rural estab.
	Alienated	In process of alienation	Leased or licensed (c)	Other		Crops (d)	Sown grasses (d)		
1860.....	1 242				1860-61.....	62			
1870.....	1 540				1870-71.....	64	(e)	(e)	(e)
1880.....	1 713				1880-81.....	57			
1890.....	1 900		293	4 640	1890-91.....	64	81		
1900.....	1 957		513	4 364	1900-01.....	91	124	1 782	1 996
1910.....	1 996	447	591	3 799	1910-11.....	116	200	1 862	2 178
1920.....	2 121	390	920	3 402	1920-21.....	120	267	2 216	2 603
1921.....	1 228	372	980	3 352	1921-22.....	119	316	2 157	2 592
1922.....	2 156	356	994	3 327	1922-23.....	121	347	2 122	2 590
1923.....	2 189	323	979	3 342	1923-24.....	113	324	2 167	2 604
1924.....	2 222	295	971	3 345	1924-25.....	107	351	2 157	2 614
1925.....	2 208	283	977	3 327	1925-26.....	108	332	2 170	2 610
1926.....	2 264	261	1 158	3 150	1926-27.....	117	320	2 198	2 636
1927.....	2 279	249	1 542	2 763	1927-28.....	120	317	2 257	2 694
1928.....	2 292	238	1 768	2 535	1928-29.....	111	310	2 264	2 684
1929.....	2 306	227	1 140	3 160	1929-30.....	107	297	2 245	2 650
1930.....	2 315	219	1 122	3 177	1930-31.....	108	305	2 241	2 654
1931.....	2 323	209	1 075	3 227	1931-32.....	100	262	2 265	2 627
1932.....	2 331	203	1 057	3 243	1932-33.....	113	262	2 294	2 669
1933.....	2 337	197	1 061	3 238	1933-34.....	117	272	2 313	2 701
1934.....	2 349	189	1 094	3 201	1934-35.....	118	291	2 348	2 757
1935.....	2 358	180	1 104	3 191	1935-36.....	98	292	2 414	2 805
1936.....	2 366	179	1 074	3 215	1936-37.....	107	304	2 362	2 773
1937.....	2 372	177	1 115	3 170	1937-38.....	103	309	2 322	2 734
1938.....	2 379	175	1 090	3 189	1938-39.....	98	308	2 336	2 743
1939.....	2 385	175	1 053	3 196	1939-40.....	104	311	2 328	2 743
1940.....	2 392	171	1 098	3 172	1940-41.....	103	313	2 282	2 698
1941.....	2 400	169	1 129	3 135	1941-42.....	114	318	2 316	2 748
1942.....	2 411	163	1 113	3 146	1942-43.....	121	n.a.	n.a.	2 641
1943.....	2 418	162	1 140	3 113	1943-44.....	136	164	2 287	2 587
1944.....	2 427	168	1 134	3 104	1944-45.....	139	165	2 331	2 635
1945.....	2 439	165	1 123	3 107	1945-46.....	132	234	2 256	2 622
1946.....	2 448	161	1 110	3 115	1946-47.....	123	230	2 237	2 590
1947.....	2 460	157	1 100	3 116	1947-48.....	112	223	2 167	2 502
1948.....	2 473	153	1 087	3 121	1948-49.....	112	268	2 098	2 478
1950.....	2 486	148	1 134	3 065	1949-50.....	118	308	2 169	2 594
1951.....	2 496	145	1 080	3 112	1950-51.....	122	322	2 176	2 621
1952.....	2 514	142	1 108	3 069	1951-52.....	124	237	2 155	2 605
1953.....	2 525	139	1 111	3 058	1952-53.....	130	326	2 198	2 654
1954.....	2 534	137	1 055	3 107	1953-54.....	142	336	2 156	2 635
1955.....	2 516	134	1 018	3 136	1954-55.....	132	363	2 177	2 672
1956.....	2 554	126	1 010	3 143	1955-56.....	137	400	2 145	2 682
1957.....	2 561	127	655	3 490	1956-57.....	122	424	2 088	2 634
1958.....	2 568	84	623	3 558	1957-58.....	122	458	2 070	2 649
1959.....	2 575	81	615	3 562	1958-59.....	144	461	2 055	2 660
1960.....	2 584	77	618	3 554	1959-60.....	135	491	2 009	2 635
1961.....	2 591	86	626	3 531	1960-61.....	153	487	1 995	2 635
1962.....	2 597	80	606	3 551	1961-62.....	155	508	1 988	2 651
1963.....	2 602	80	586	3 565	1962-63.....	165	515	1 919	2 599
1964.....	2 670	89	628	3 446	1963-64.....	158	552	1 871	2 581
1965.....	2 679	83	595	3 476	1964-65.....	167	576	1 855	2 598
1966.....	2 677	84	540	3 531	1965-66.....	158	622	1 849	2 629
1967.....	2 692	100	535	3 506	1966-67.....	181	628	1 825	2 633
1968.....	2 692	93	478	3 571	1967-68.....	170	680	1 813	2 663
1969.....	2 693	96	465	3 579	1968-69.....	193	618	1 776	2 667
1970.....	2 697	100	442	3 594	1969-70.....	169	737	1 732	2 637
1971.....	2 702	99	381	3 651	1970-71.....	172	747	1 712	2 631
1972.....	2 697	100	274	3 760	1971-72.....	147	772	1 688	2 607
1973.....	2 729	133	248	3 723	1972-73.....	80	856	1 656	2 592
1974.....	2 731	135	236	3 728	1973-74 (f).....	74	920	1 567	2 561
1975.....	2 755	159	223	3 693	1974-75.....	67	921	1 504	2 492
1976.....	2 751	154	229	3 696	1975-76 (f).....	60	935	1 464	2 459
1977.....	2 743	146	163	3 778	1976-77 (f).....	65	904	1 340	2 308
1978.....	2 517	120	165	4 028	1977-78.....	70	910	1 302	2 281
1979.....	2 494	96	148	4 092	1978-79.....	80	904	1 247	2 232

(a) Area of State, 68 300 square kilometres.

(b) At 31 December until 1948; at 30 June for 1950 and subsequent years.

(c) Excludes areas under pulpwood concessions and exclusive forest permits.

(d) Area of sown grasses cut for hay, seed and green fodder is included under 'crops'.

(e) Not available on a comparable basis.

(f) Not strictly comparable with earlier years due to changes in definition of a 'rural establishment'.

(Chapter 7)

## Area and Production of Principal Crops, Tasmania

Year	Barley for grain			Oats for grain			Wheat for grain			Blue peas		
	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Area	Total production	Yield per hectare
	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes
1860-61	2 524	2 877	1.14	12 263	16 844	1.37	26 891	38 267	1.42			
1870-71	3 082	3 676	1.19	12 523	12 568	1.00	23 222	24 240	1.04			
1880-81	3 358	3 844	1.14	8 034	7 990	0.99	20 243	20 271	1.00			
1890-91	1 771	2 269	1.28	8 393	9 444	1.13	13 133	17 378	1.32			
1900-01	1 822	2 657	1.46	18 240	25 580	1.40	20 973	30 011	1.43	n.a.	n.a.	n.a.
1910-11	2 119	3 234	1.53	25 854	37 515	1.45	21 142	30 290	1.43			
1911-12	2 461	3 364	1.37	23 303	27 357	1.17	15 058	17 827	1.18			
1912-13	3 562	6 043	1.70	25 271	41 041	1.62	10 209	17 036	1.67			
1913-14	3 125	4 261	1.36	23 830	28 976	1.22	7 459	9 452	1.27			
1914-15	2 362	2 382	1.01	23 093	24 397	1.06	9 658	10 384	1.08	1 921	2 019	1.05
1915-16	2 189	2 625	1.20	31 651	39 809	1.26	19 685	26 859	1.36	1 474	1 684	1.14
1916-17	1 877	2 016	1.07	22 269	18 294	0.82	11 246	9 414	0.84	2 267	3 234	1.43
1917-18	2 098	2 228	1.06	14 071	10 713	0.76	8 827	6 821	0.77	4 518	5 584	1.24
1918-19	2 847	3 208	1.13	14 662	15 426	1.05	4 823	5 042	1.05	8 408	9 541	1.13
1919-20	2 547	2 739	1.08	19 500	22 587	1.16	4 653	5 773	1.24	5 060	4 589	0.91
1920-21	2 489	3 667	1.47	20 426	27 530	1.35	11 446	15 294	1.34	3 476	4 945	1.42
1921-22	2 930	3 794	1.29	22 113	28 066	1.27	11 325	15 599	1.38	4 182	5 212	1.25
1922-23	2 309	3 455	1.50	23 801	30 450	1.28	10 216	15 394	1.51	3 532	4 377	1.24
1923-24	1 712	2 151	1.26	20 825	24 723	1.19	5 869	8 260	1.41	2 927	3 466	1.48
1924-25	1 218	1 153	0.95	18 686	19 381	1.04	5 242	6 254	1.19	3 112	3 362	1.08
1925-26	2 114	2 059	0.97	14 869	15 191	1.02	7 726	10 692	1.38	3 324	2 891	0.87
1926-27	2 293	3 405	1.48	19 571	24 673	1.26	9 386	14 513	1.55	3 043	4 055	1.33
1927-28	2 064	3 214	1.56	17 381	25 452	1.46	8 531	20 896	2.45	3 672	5 631	1.53
1928-29	1 867	2 252	1.21	15 217	18 389	1.21	9 134	12 306	1.35	3 960	4 624	1.17
1929-30	2 806	3 795	1.35	15 807	21 365	1.35	6 801	10 158	1.49	4 097	6 031	1.47
1930-31	2 506	3 832	1.53	14 536	19 141	1.32	7 732	10 581	1.37	2 859	4 060	1.42
1931-32	3 390	2 721	0.80	7 451	6 488	0.87	4 744	4 944	1.04	2 439	2 079	0.85
1932-33	3 478	4 808	1.38	12 404	15 059	1.21	8 492	11 704	1.38	3 687	5 688	1.54
1933-34	3 173	3 915	1.23	12 626	15 532	1.23	9 752	15 153	1.55	5 663	6 592	1.16
1934-35	2 339	3 989	1.71	14 816	19 168	1.29	6 740	8 311	1.23	5 283	4 722	0.89
1935-36	2 115	2 107	1.00	9 683	10 123	1.05	4 210	5 027	1.19	4 116	3 430	0.83
1936-37	2 811	5 470	1.95	8 884	13 659	1.54	8 627	15 430	1.79	2 613	3 912	1.50
1937-38	3 762	6 958	1.85	13 128	18 767	1.43	8 531	14 216	1.67	1 882	2 707	1.44
1938-39	3 518	4 731	1.34	10 049	11 727	1.17	3 986	5 548	1.39	1 787	2 050	1.15
1939-40	3 125	4 446	1.42	9 352	9 626	1.03	3 033	2 911	0.96	2 113	3 407	1.61
1940-41	2 286	3 349	1.47	7 099	7 569	1.07	3 253	3 794	1.17	3 830	5 237	1.37
1941-42	2 153	2 672	1.24	11 043	15 248	1.38	2 596	3 924	1.51	7 485	8 452	1.13
1942-43	1 104	1 428	1.29	5 325	5 310	1.00	1 671	1 982	1.19	10 989	10 961	1.00
1943-44	1 391	2 150	1.55	3 943	5 438	1.38	1 958	3 301	1.69	15 176	15 785	1.04
1944-45	2 189	3 616	1.65	5 977	7 630	1.28	1 551	2 504	1.61	8 828	13 014	1.47
1945-46	2 730	2 803	1.03	5 656	5 120	0.91	2 016	1 801	0.89	9 420	7 922	0.84
1946-47	2 532	3 538	1.40	9 181	10 825	1.18	3 051	3 763	1.23	4 773	6 364	1.33
1947-48	3 298	4 961	1.50	6 910	6 548	0.95	3 147	3 195	1.02	2 783	3 938	1.42
1948-49	2 966	4 728	1.59	4 734	4 756	1.00	2 779	4 211	1.52	2 625	3 999	1.52
1949-50	1 759	2 975	1.69	9 232	10 499	1.14	2 215	3 440	1.55	3 101	3 955	1.28
1950-51	1 320	2 061	1.56	9 486	7 802	0.82	2 152	2 564	1.19	3 395	4 630	1.36
1951-52	1 716	3 400	1.98	10 740	10 803	1.01	1 458	2 541	1.74	3 078	5 338	1.73
1952-53	3 253	4 930	1.52	8 114	5 197	0.64	2 707	4 227	1.56	1 411	1 903	1.35
1953-54	3 819	6 738	1.76	8 141	8 381	1.03	3 921	7 116	1.81	2 159	3 096	1.43
1954-55	2 936	4 541	1.55	9 154	8 212	0.90	2 955	4 286	1.45	2 292	3 093	1.35
1955-56	2 558	4 339	1.70	11 604	9 964	0.86	2 519	3 478	1.38	2 334	3 690	1.58
1956-57	2 865	5 341	1.86	6 701	4 594	0.69	1 578	2 393	1.52	3 349	5 088	1.52
1957-58	3 393	6 140	1.81	8 381	8 762	1.05	2 381	4 148	1.74	2 923	3 854	1.32
1958-59	3 777	6 696	1.77	8 984	8 921	0.99	2 605	4 423	1.70	1 002	1 302	1.30
1959-60	5 016	9 511	1.90	8 910	9 305	1.04	3 344	4 912	1.47	1 285	2 148	1.67
1960-61	6 204	7 821	1.26	9 449	7 114	0.75	2 797	4 003	1.43	1 332	1 198	0.90
1961-62	7 579	13 794	1.82	10 908	10 676	0.98	6 300	9 327	1.48	1 566	2 814	1.80
1962-63	7 993	14 340	1.79	12 587	15 046	1.20	6 208	11 322	1.82	2 299	3 409	1.48
1963-64	5 581	9 414	1.69	12 280	15 339	1.25	7 107	13 047	1.84	2 087	2 693	1.29
1964-65	6 264	12 031	1.92	11 366	9 463	0.83	6 801	9 842	1.45	1 603	2 752	1.72
1965-66	8 056	15 541	1.93	11 449	12 304	1.07	5 709	9 955	1.74	2 223	2 779	1.25
1966-67	8 521	17 540	2.06	14 532	17 236	1.19	5 159	10 412	2.02	1 769	3 039	1.72
1967-68	9 733	20 096	2.06	14 314	18 430	1.29	4 864	8 548	1.76	1 725	2 540	1.47
1968-69	10 608	20 092	1.89	12 721	10 598	0.83	7 039	11 088	1.58	1 358	2 160	1.59
1969-70	12 016	24 896	2.07	8 971	8 272	0.92	5 962	9 531	1.60	1 577	3 224	2.04
1970-71	12 884	29 825	2.31	9 444	8 839	0.94	4 479	7 638	1.71	2 023	4 608	2.28
1971-72	12 576	27 753	2.21	6 432	7 065	1.10	4 570	8 299	1.82	1 025	1 650	1.61
1972-73	12 802	18 711	1.46	6 477	7 144	1.10	4 251	7 701	1.81	504	387	0.77
1973-74 (a)	11 121	23 790	2.13	9 173	8 247	0.89	2 321	3 510	1.39	587	1 027	1.74
1974-75	12 020	27 266	2.27	6 069	5 496	0.90	1 535	2 282	1.48	969	2 171	2.24
1975-76 (a)	11 475	18 389	1.60	3 924	3 497	0.89	1 644	1 728	1.05	209	261	1.25
1976-77 (a)	11 644	24 571	2.11	6 387	8 801	1.38	1 980	3 929	1.98	81	139	1.72
1977-78	11 444	19 403	1.70	4 616	4 279	0.93	1 257	1 545	1.23	326	417	1.28
1978-79	11 938	26 971	2.26	8 564	11 826	1.38	1 366	2 867	2.10	466	928	1.99

(a) Area and production details are not strictly comparable with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

## Area and Production of Principal Crops, Tasmania—continued

Year	Potatoes			Hops			Pasture			Apples		
	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare	Area	Total production	Yield per hectare	Bearing area	Total production	Yield per hectare
	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes	ha	tonnes	tonnes
1860-61	3 084	34 128	11.07	n.a.	n.a.	n.a.	12 880	63 318	4.92		2 267	
1870-71	3 975	36 606	9.21	260	339	1.30	13 602	41 417	3.04		2 819	
1880-81	4 217	33 070	7.84	230	292	1.27	12 794	36 459	2.85		2 953	
1890-91	8 147	74 332	9.12	151	196	1.30	18 365	52 856	2.88		7 030	
1900-01	9 335	95 368	10.22	253	316	1.25	24 868	95 710	3.85	n.a.	10 497	n.a.
1910-11	10 615	71 215	6.71	420	805	1.92	29 539	117 039	3.96		25 681	
1911-12	8 829	63 162	7.15	416	480	1.15	31 349	109 412	3.49		28 691	
1912-13	9 960	73 730	7.40	505	871	1.72	40 403	186 658	4.62		25 357	
1913-14	12 469	81 679	6.55	548	705	1.29	34 049	114 771	3.37	6 860	36 692	5.35
1914-15	12 793	80 173	6.27	540	768	1.42	36 259	83 287	2.30	7 164	28 996	4.05
1920-21	12 950	90 102	6.96	516	845	1.64	45 980	179 636	3.91	10 364	44 941	4.34
1921-22	14 890	109 351	7.34	572	995	1.74	37 006	139 190	3.76	10 829	56 982	5.26
1922-23	13 924	102 825	7.38	599	986	1.65	40 504	169 967	4.20	10 372	59 592	5.75
1923-24	14 989	101 540	6.77	604	1 040	1.72	39 329	146 614	3.73	10 393	36 006	3.46
1924-25	14 638	84 715	5.88	605	1 009	1.67	35 590	123 054	3.46	10 383	42 103	4.05
1925-26	13 431	68 422	5.09	483	791	1.64	37 472	116 764	3.12	10 311	78 719	7.63
1926-27	13 753	115 931	8.43	528	974	1.84	39 776	153 627	3.86	10 120	55 248	5.46
1927-28	17 951	141 065	7.86	514	1 119	2.18	34 710	126 929	3.66	10 237	89 025	8.70
1928-29	15 094	76 429	5.06	480	875	1.82	32 452	121 344	3.74	10 219	47 628	4.66
1929-30	13 647	92 600	6.79	472	872	1.85	32 437	121 723	3.75	9 562	75 251	7.87
1930-31	15 066	96 818	6.43	393	760	1.93	33 697	131 027	3.89	9 672	72 394	7.48
1931-32	14 727	96 920	6.58	345	725	2.10	34 118	94 081	2.76	9 377	111 334	11.87
1932-33	14 475	99 809	6.90	321	628	1.96	37 501	143 403	4.20	9 402	84 015	8.94
1933-34	14 778	82 578	5.59	328	730	2.22	31 414	111 153	3.54	9 436	94 360	10.00
1934-35	14 714	71 142	4.83	334	831	2.49	38 857	152 492	3.92	9 485	74 947	7.90
1935-36	14 050	87 183	6.21	352	981	2.79	30 247	98 443	2.53	9 296	75 251	8.05
1936-37	14 960	140 781	9.41	365	950	2.60	36 177	139 068	3.84	8 745	87 844	10.05
1937-38	13 139	101 574	7.73	357	938	2.68	29 561	114 809	3.88	8 881	91 292	10.28
1938-39	10 803	90 764	8.40	373	1 041	2.79	32 358	111 291	3.44	8 684	109 048	12.56
1939-40	12 323	116 245	9.43	368	808	2.20	38 957	143 674	3.69	8 850	98 075	11.08
1940-41	15 121	115 871	7.66	369	1 351	3.66	30 789	96 708	3.14	8 808	113 277	12.86
1941-42	12 400	111 613	9.00	427	1 280	3.00	37 488	149 997	4.00	8 970	121 107	13.50
1942-43	16 359	138 112	8.44	448	1 183	2.64	33 209	111 721	3.36	8 889	109 410	12.31
1943-44	24 484	221 296	9.04	435	1 267	2.91	40 178	156 303	3.89	8 896	152 846	17.18
1944-45	32 817	350 773	4.55	441	1 102	2.50	38 855	148 253	3.82	8 723	125 165	14.35
1945-46	22 762	239 930	10.54	445	904	2.03	40 371	118 958	2.95	8 702	162 353	18.66
1946-47	17 493	173 359	9.91	490	1 005	2.05	42 093	172 103	4.09	8 544	80 548	9.43
1947-48	16 342	145 037	8.88	506	1 113	2.20	34 137	139 857	4.10	8 239	150 389	18.25
1948-49	13 079	133 915	10.24	508	694	1.37	36 656	153 118	4.18	7 826	48 828	6.24
1949-50	13 804	123 958	8.98	518	977	1.89	36 962	158 151	4.28	7 661	91 330	11.92
1950-51	12 780	125 990	9.86	518	1 125	2.17	39 007	163 301	4.19	7 378	92 359	12.52
1951-52	12 753	153 424	12.03	531	778	1.47	39 563	175 051	4.42	7 273	93 121	12.91
1952-53	14 304	116 338	8.13	524	1 367	2.61	44 534	195 289	4.39	7 200	71 575	9.94
1953-54	13 971	146 616	10.49	518	973	1.88	49 877	245 459	4.92	7 184	101 047	14.07
1954-55	10 606	102 621	9.68	539	1 353	2.51	39 051	160 495	4.11	6 890	95 426	13.85
1955-56	8 434	79 181	9.39	531	1 437	2.71	55 505	265 619	4.79	6 950	112 896	16.24
1956-57	7 740	91 140	11.78	569	974	1.71	49 837	242 209	4.86	6 754	64 792	9.59
1957-58	8 780	103 129	11.75	571	1 302	2.28	44 581	208 062	4.67	6 804	126 403	18.58
1958-59	6 550	87 279	13.32	579	1 535	2.65	62 250	306 923	4.93	6 651	94 931	14.27
1959-60	6 283	99 573	15.85	581	1 270	2.19	51 211	224 778	4.39	6 509	104 266	16.02
1960-61	4 401	39 677	9.02	569	1 279	2.25	69 206	331 206	4.79	6 404	106 571	16.64
1961-62	4 504	72 709	16.14	571	1 287	2.25	63 632	289 971	4.56	6 239	149 436	23.95
1962-63	5 600	83 870	14.98	588	1 298	2.21	66 952	318 028	4.75	6 268	119 297	19.03
1963-64	4 373	66 470	15.20	592	717	1.21	60 557	253 175	4.18	6 291	162 791	25.88
1964-65	3 801	57 978	15.25	597	947	1.59	72 947	370 204	5.07	6 286	118 250	18.81
1965-66	4 853	77 626	16.00	603	1 392	2.31	59 824	261 366	4.37	6 254	159 343	25.48
1966-67	4 159	74 476	17.91	594	948	1.60	82 225	443 919	5.40	6 165	120 040	19.47
1967-68	4 435	80 327	18.11	608	1 363	2.24	72 373	314 060	4.34	6 048	151 322	25.02
1968-69	4 638	73 278	15.80	616	1 582	2.57	85 212	502 159	5.89	5 863	135 986	23.19
1969-70	3 790	67 995	17.94	565	1 268	2.24	69 526	367 340	5.28	5 804	140 977	24.29
1970-71	3 640	72 591	19.94	452	1 077	2.38	85 656	447 766	5.23	5 715	140 463	24.58
1971-72	3 593	70 370	19.59	539	1 159	2.15	81 176	449 936	5.54	5 218	111 887	21.44
1972-73	3 330	78 286	23.51	616	1 450	2.35	53 937	215 580	4.00	4 980	133 449	26.80
1973-74 (a)	3 127	62 866	20.10	703	1 949	2.77	88 884	448 355	5.04	4 748	113 012	27.24
1974-75	4 143	95 610	23.07	662	1 439	2.17	78 557	375 969	4.79	3 335	95 247	28.56
1975-76 (a)	3 354	59 614	28.51	513	1 129	2.20	70 262	322 235	4.59	2 947	72 529	24.61
1976-77 (a)	3 705	112 269	30.30	587	1 330	2.27	69 730	334 961	4.80	2 741	71 781	26.19
1977-78	3 592	107 240	29.86	567	1 201	2.12	46 480	166 495	3.58	2 601	63 444	24.39
1978-79	3 646	124 385	34.12	578	1 457	2.52	65 835	295 464	4.49	2 693	85 230	31.65

(a) Area and production details are not strictly comparable with data for earlier years due to changes in the definition of a 'rural establishment'.

(Chapter 7)

## Livestock Numbers; Production of Wool; Lambing, Tasmania

Year	Livestock (a)				Production of Wool (b)			Lambing	
	Horses	Cattle	Sheep	Pigs	Number of sheep and lambs shorn	Average yield per sheep and lamb shorn (including crutchings)	Production of wool (including dead, fell-mongered & exported on skins)	Ewes mated	Lambs marked
	'000	'000	'000	'000	'000	kg	'000 kg	'000	'000
1860	21	83	1 701	31	n.a.	n.a.	2 058	n.a.	n.a.
1870	23	101	1 350	49			1 881		
1880	25	127	1 794	48			4 094		
1890	31	162	1 619	82			4 075		
1900	32	166	1 684	68			3 064		
1910	41	202	1 788	64			6 050		
1911	42	217	1 823	67	1 572	n.a.	5 773	596	399
1912	44	222	1 863	49			6 539		
1913	44	206	1 745	38			5 485		
1914-15	42	177	1 675	35			5 465		
1920-21	39	208	1 571	38			5 218		
1921-22	38	217	1 551	50	1 551	2-94	5 278	416	299
1922-23	37	218	1 558	46	1 428	3-25	5 542	506	378
1923-24	38	220	1 558	47	1 503	3-26	5 312	524	411
1924-25	37	226	1 614	47	1 507	3-13	5 662	517	392
1925-26	38	212	1 619	41	1 630	3-16	5 699	557	423
1926-27	37	213	1 808	39	1 639	3-18	5 594	554	390
1927-28	36	211	1 905	42	1 738	2-93	6 021	563	433
1928-29	35	209	2 001	48	1 859	2-99	6 759	629	488
1929-30	34	215	2 091	53	1 902	3-22	6 804	640	502
1930-31	33	230	2 120	55	1 983	3-14	6 713	679	534
1931-32	31	232	2 012	41	1 961	3-11	6 668	695	547
1932-33	30	251	2 041	41	1 913	3-14	6 895	647	478
1933-34	30	262	2 035	38	1 940	3-16	6 441	679	526
1934-35	31	262	2 038	40	1 991	2-91	6 366	686	517
1935-36	31	270	2 140	45	1 976	2-90	7 394	672	497
1936-37	31	262	2 234	40	2 010	3-37	6 381	735	586
1937-38	32	255	2 521	43	1 106	2-72	7 076	791	594
1938-39	30	262	2 626	45	2 460	2-60	7 946	873	722
1939-40	30	252	2 677	45	2 432	3-03	8 316	940	737
1940-41	29	259	2 682	47	2 509	3-08	7 746	940	756
1941-42	29	253	2 398	45	2 517	2-78	7 704	988	764
1942-43	27	245	2 227	49	2 416	3-04	7 827	844	669
1943-44	26	230	2 188	46	2 293	2-98	8 130	785	655
1944-45	26	225	2 156	47	2 260	2-93	7 404	811	669
1945-46	25	216	1 926	47	2 235	2-79	7 411	756	629
1946-47	24	220	1 933	47	2 015	2-73	7 549	701	509
1947-48	23	244	2 087	45	2 005	3-04	6 952	577	440
1948-49	22	266	2 160	37	2 085	3-18	7 641	779	656
1949-50	21	275	2 170	36	2 198	3-09	7 692	803	662
1950-51	20	272	2 182	45	2 255	2-97	7 824	800	652
1951-52	19	266	2 338	47	2 245	2-99	9 305	774	637
1952-53	18	275	2 422	39	2 379	3-42	9 884	839	726
1953-54	17	295	2 465	46	2 502	3-19	10 794	894	768
1954-55	16	319	2 595	58	2 553	3-16	10 794	916	788
1955-56	15	332	2 673	49	2 715	3-53	10 624	968	884
1956-57	14	354	2 943	52	3 978	4-06	13 009	979	877
1957-58	13	371	3 298	63	4 318	3-88	13 234	1 150	1 056
1958-59	12	374	3 536	69	4 517	3-88	14 803	1 266	1 199
1959-60	11	375	3 494	67	4 572	3-34	15 241	1 381	1 269
1960-61	9	394	3 439	71	4 632	4-09	14 456	1 461	1 354
1961-62	9	425	3 532	76	4 792	4-05	15 635	1 378	1 267
1962-63	8	444	3 570	70	3 678	3-44	15 677	1 440	1 368
1963-64	8	450	3 600	83	3 830	3-56	15 425	1 419	1 310
1964-65	7	451	3 792	92	3 783	3-64	17 994	1 458	1 353
1965-66	n.a.	492	4 127	96	3 868	3-47	18 986	1 478	1 374
1966-67	7	522	4 321	86	3 978	4-06	19 574	1 651	1 594
1967-68	n.a.	564	4 428	87	4 318	3-88	21 299	1 688	1 574
1968-69	n.a.	586	4 395	95	4 517	3-88	21 299	1 779	1 522
1969-70	n.a.	646	4 560	111	4 632	4-09	21 861	1 736	1 561
1970-71	n.a.	733	4 517	113	4 792	4-05	21 671	1 831	1 715
1971-72	n.a.	829	4 237	104	4 806	3-99	21 063	1 889	1 705
1972-73	n.a.	900	3 824	85	4 607	4-03	18 154	1 805	1 617
1973-74(c)	n.a.	884	3 964	68	4 251	3-76	17 549	1 604	1 369
1974-75	n.a.	921	4 136	64	4 101	3-90	18 888	1 535	1 361
1975-76(c)	n.a.	909	4 249	70	4 153	4-12	19 951	1 644	1 466
1976-77(c)	n.a.	819	4 015	65	4 352	4-13	18 109	1 677	1 515
1977-78	n.a.	733	3 969	64	4 229	3-82	18 924	1 672	1 529
1978-79	n.a.	r 657	r 4 157	r 61	4 242	4-00	19 079	r 1 712	r 1 582

(a) Up to 1925-26 numbers recorded were at varying dates in the years shown; from 1926 to 1940 at 31 December; from 1941-42 at 31 March.

(b) All wool converted to equivalent greasy weight.

(c) Details not strictly compatible with data for earlier years due to changes in the definition of a 'rural establishment'.

## Appendix A

(Chapter 7)

## Livestock Slaughtered (a) for Human Consumption, Tasmania

Year	Cattle and Calves				Sheep and Lambs			Pigs
	Bulls, bullocks & steers	Cows and heifers	Calves	Total	Sheep	Lambs	Total	
1924-25	21 068	12 544	2 542	36 154	212 983	63 134	276 117	55 229
1929-30	20 430	13 034	1 814	35 278	228 090	113 437	341 527	64 287
1939-40	32 685	12 110	3 633	48 428	248 372	212 585	460 957	73 398
1944-45	27 290	14 536	4 701	46 527	323 797	185 616	509 413	58 068
1949-50	29 331	23 736	4 580	57 647	245 691	262 360	508 051	50 861
1950-51	32 199	28 921	8 637	69 757	234 084	250 535	484 619	57 787
1951-52	33 352	29 506	8 729	71 587	226 377	256 116	482 493	65 893
1952-53	32 913	25 270	12 297	70 480	269 776	306 739	576 515	65 520
1953-54	22 630	25 188	13 955	61 773	286 665	307 326	593 991	59 473
1954-55	26 741	32 871	15 333	74 945	287 103	356 103	643 206	79 305
1955-56	32 259	36 370	19 786	88 415	256 188	388 802	644 990	87 609
1956-57	38 494	38 341	25 195	102 030	280 082	403 859	683 941	82 032
1957-58	42 028	45 294	30 534	117 856	283 242	451 214	734 456	90 593
1958-59	42 525	49 046	35 923	127 494	362 988	546 196	909 184	107 489
1959-60	47 147	56 885	40 548	144 580	504 961	661 470	1 166 431	114 538
1960-61	35 515	43 309	36 170	114 994	474 690	601 042	1 075 732	111 457
1961-62	42 614	48 638	44 230	135 482	510 626	649 306	1 159 932	120 450
1962-63	49 510	62 317	46 149	157 976	465 996	628 757	1 094 753	115 424
1963-64	51 518	70 885	53 823	176 226	544 945	582 113	1 127 058	123 502
1964-65	52 946	70 510	50 610	174 066	424 810	562 135	986 945	134 526
1965-66	47 066	60 664	46 514	154 244	566 671	597 197	1 163 868	146 266
1966-67	52 475	67 206	50 789	170 470	552 235	606 859	1 159 094	148 913
1967-68	57 871	66 016	47 872	171 759	600 124	524 850	1 124 974	142 986
1968-69	68 376	64 160	45 236	177 772	567 501	673 446	1 240 947	138 954
1969-70	78 618	66 473	32 765	177 856	608 311	688 664	1 296 975	160 112
1970-71	78 926	61 139	22 011	162 076	713 204	680 679	1 393 883	170 579
1971-72	96 255	69 186	19 346	184 787	812 960	662 193	1 475 153	165 007
1972-73	124 672	110 177	25 933	260 782	636 501	641 718	1 278 219	152 004
1973-74	126 251	103 552	29 554	259 357	335 566	489 697	825 263	115 625
1974-75	149 285	75 382	37 450	262 117	402 813	577 119	979 932	101 359
1975-76	164 059	119 418	64 536	348 013	454 912	613 611	1 068 523	94 090
1976-77	144 910	139 910	72 888	357 708	469 125	523 522	992 647	99 603
1977-78	160 977	132 802	68 686	362 465	386 772	650 067	1 036 839	92 474
1978-79	123 590	103 152	54 466	281 209	345 388	502 890	848 278	90 520

(a) Including livestock slaughtered on farms.

(Chapter 7)

Production of Meat, Tasmania  
(Tonnes: Carcass Weight)

Year	Beef and veal			Mutton and lamb			Pigmeat (a)	Total all meat
	Beef	Veal	Total	Mutton	Lamb	Total		
1924-25	8 233		8 233	4 154	888	5 042	2 561	15 836
1929-30	8 153		8 153	4 448	1 595	6 043	2 848	17 044
1939-40	10 626	165	10 791	4 845	2 989	7 834	3 560	22 185
1944-45	9 117	212	9 329	6 400	2 948	9 348	3 104	21 781
1949-50	12 299	169	12 468	4 896	4 173	9 069	2 597	24 134
1950-51	14 027	303	14 330	4 890	3 910	8 800	2 835	25 965
1951-52	14 405	216	14 621	4 808	4 311	9 119	3 159	26 899
1952-53	13 751	313	14 064	5 745	5 082	10 827	3 176	28 067
1953-54	10 888	292	11 180	6 100	5 150	11 250	2 736	25 166
1954-55	13 537	353	13 890	6 147	5 945	12 092	3 484	29 466
1955-56	15 133	530	15 663	5 260	6 707	11 967	3 693	31 323
1956-57	17 592	612	18 204	5 812	6 998	12 810	3 402	34 416
1957-58	19 635	726	20 361	5 694	7 739	13 433	4 284	38 078
1958-59	19 893	839	20 732	7 444	9 223	16 667	4 990	42 389
1959-60	22 610	906	23 516	10 267	10 846	21 113	5 438	50 067
1960-61	16 388	777	17 165	9 513	9 715	19 228	5 138	41 531
1961-62	19 076	910	19 989	10 228	10 326	20 554	5 515	46 058
1962-63	23 076	999	24 075	9 614	10 083	19 697	5 549	49 321
1963-64	24 988	1 337	26 325	11 101	9 300	20 401	6 022	52 748
1964-65	25 741	951	26 692	9 225	9 189	18 414	6 691	51 797
1965-66	22 429	951	23 380	11 697	9 739	21 436	7 136	51 952
1966-67	24 124	967	25 091	11 412	9 825	21 237	7 279	53 607
1967-68	24 509	977	25 486	11 666	8 497	20 163	7 001	52 650
1968-69	27 583	802	28 385	11 701	11 112	22 813	7 137	58 335
1969-70	30 909	599	31 509	12 767	11 282	24 049	8 007	63 564
1970-71	29 481	398	29 879	14 755	11 318	26 073	8 530	64 482
1971-72	34 422	374	34 796	16 314	10 875	27 189	8 266	70 251
1972-73	46 946	525	47 471	12 201	10 327	22 528	7 389	77 388
1973-74	45 669	613	46 282	6 672	8 096	14 768	5 477	66 527
1974-75	47 592	721	48 313	7 984	9 508	17 492	4 872	70 677
1975-76	57 924	1 242	59 166	8 997	9 849	18 846	4 516	82 529
1976-77	55 790	1 613	57 403	8 494	8 189	16 683	4 946	79 032
1977-78	59 779	1 556	61 335	7 035	9 849	16 884	4 785	83 004
1978-79	46 269	1 152	47 421	6 833	7 883	14 716	4 834	66 971

(a) Includes pork for manufacture into bacon and ham.



# Statistical Summary

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(Chapter 7)

Value of Agricultural Commodities Produced, Tasmania  
(\$'000)

Year	Crops (a)		Livestock slaughtering and other disposals		Livestock products		Total agriculture	
	Gross	Local	Gross	Local	Gross	Local	Gross	Local
1970-71	40 169	29 174	28 142	25 910	41 903	40 194	110 214	95 277
1971-72	33 748	24 043	31 468	28 956	46 980	45 133	112 196	98 132
1972-73	40 041	28 261	43 562	40 363	64 750	61 652	148 353	130 276
1973-74	46 649	36 969	58 019	54 000	59 995	57 262	164 663	148 231
1974-75	49 409	39 670	31 707	29 083	r 56 520	r 53 124	r 137 636	r 121 876
1975-76	r 44 092	r 36 350	34 052	31 042	r 60 672	r 56 991	r 138 816	r 124 383
1976-77	r 57 604	r 50 634	46 103	42 199	r 72 075	r 68 176	r 175 782	r 161 009
1977-78	55 880	49 814	54 776	47 855	76 108	72 155	186 764	169 824
1978-79	80 053	71 890	91 737	80 197	90 518	86 297	262 308	238 384

(a) Excludes crops and pasture harvested for green feed or silage.

(Chapter 7)

Weighted Average Prices Paid To Farmers Per Unit of Selected Farm Products, Tasmania  
(\$)

Year	Cereals for grain		Hops	Orchard fruit		Small fruit		Potatoes	Hay	Wool greasy
	Wheat	Barley		Apples	Pears	Currants	Raspberries			
	per tonne	per tonne	per tonne	per tonne	per tonne	per kg	per kg	per tonne	per tonne	per kg
1929-30	18.37	14.99	198.42	17.32	22.54	0.04	0.04	13.28	8.37	0.22
1934-35	12.12	13.23	308.65	27.82	28.42	0.04	0.04	17.37	5.71	0.20
1939-40	12.49	16.75	330.69	22.57	24.50	0.07	0.07	18.20	5.91	0.26
1944-45	17.64	23.37	396.83	19.95	19.60	0.09	0.07	24.61	10.92	0.35
1949-50	49.97	32.19	771.62	64.04	73.01	0.13	0.13	30.31	12.30	1.32
1954-55	49.97	73.63	1 212.54	101.31	114.17	0.18	0.18	79.33	21.36	1.41
1959-60	50.70	58.64	1 388.91	98.68	100.45	0.22	0.20	38.93	18.73	1.15
1960-61	51.44	63.49	1 366.86	101.83	126.42	0.26	0.18	88.93	18.16	1.06
1961-62	58.78	63.93	1 433.00	104.46	87.22	0.26	0.22	51.65	16.15	1.08
1962-63	54.38	61.29	1 433.00	112.33	122.01	0.24	0.22	24.78	13.94	1.21
1963-64	52.54	63.05	1 433.00	107.08	110.74	0.26	0.22	63.86	15.75	1.48
1964-65	48.86	61.29	1 499.14	113.38	129.36	0.22	0.22	116.11	12.57	1.08
1965-66	50.70	57.76	1 565.28	100.26	67.62	0.20	0.22	36.80	r 15.52	1.23
1966-67	52.54	63.49	1 653.47	124.40	118.58	0.24	0.24	53.70	r 16.35	1.12
1967-68	53.64	65.69	1 697.56	110.23	101.92	0.29	0.31	47.54	r 20.68	r 0.96
1968-69	41.88	56.88	1 697.56	106.55	124.46	0.29	0.33	28.92	r 15.88	r 1.05
1969-70	52.91	52.47	1 697.56	110.23	136.22	0.31	0.33	45.56	r 11.67	0.88
1970-71	48.13	51.14	1 697.56	103.41	134.26	0.33	0.35	r 42.18	r 13.31	r 0.74
1971-72	54.01	47.18	1 873.93	103.41	117.11	0.33	0.35	37.32	r 13.05	1.90
1972-73	52.20	52.53	1 961.40	120.87	173.95	0.35	0.35	57.23	r 20.43	2.29
1973-74	103.97	77.00	1 648.54	120.46	117.11	0.39	0.41	86.92	r 19.72	1.92
1974-75	103.51	91.78	860.22	148.65	180.70	0.47	0.53	59.43	r 27.85	1.37
1975-76	97.31	98.83	1 395.07	172.99	171.42	0.50	0.50	r 76.76	r 17.47	1.57
1976-77	82.00	111.07	1 694.57	164.64	195.11	0.55	0.58	83.33	r 25.31	2.10
1977-78	r 86.40	120.54	1 957.40	r 201.90	r 260.80	0.70	0.74	82.80	r 24.87	2.09
1978-79	108.92	122.11	2 201.96	195.49	248.20	0.72	0.87	103.43	28.09	2.34

(Chapter 8)

Assayed Contents of Metallic Minerals Produced: Coal Production, Tasmania

Year	Cadmium	Copper	Gold	Iron	Lead	Manganese
	tonnes	tonnes	kg	tonnes	tonnes	tonnes
1953	73	9 045	528	-	10 199	-
1955	50	8 529	525	-	11 448	-
1960	57	11 867	747	-	13 249	175
1961	63	12 947	836	-	12 450	188
1962	73	14 748	999	-	14 991	268
1963	75	17 075	1 133	-	15 222	262
1964	78	15 118	1 069	-	15 594	247
1965	71	15 411	1 023	-	14 466	237
1966	76	17 278	1 135	-	15 828	258
1967	74	17 540	1 167	-	15 375	247
1968	75	16 867	1 135	502 462	15 152	258
1969	77	18 983	1 252	1 388 328	15 145	209
1970	70	23 934	1 335	1 346 065	13 934	-
1971	84	25 525	1 793	1 497 486	16 617	509
1972	138	28 298	2 021	1 623 450	26 806	2 205
1973	178	25 821	1 511	1 678 146	20 236	2 399
1974	126	29 086	1 586	1 514 373	19 017	385
1975	167	26 460	1 668	1 431 041	19 552	265
1976	157	25 342	1 495	1 542 306	18 034	232
1977	199	22 002	1 891	1 413 476	22 800	427
1978	188	23 908	1 912	1 446 024	22 754	341
1979	188	22 591	1 747	1 528 225	22 160	269

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## Appendix A

(Chapter 8)

## Assayed Contents of Metallic Minerals Produced: Coal Production, Tasmania—continued

Year	Silver	Sulphur	Tin	Tungstic oxide (WO <sub>3</sub> )	Zinc	Coal production
	kg	tonnes	tonnes	tonnes	tonnes	tonnes
1953.....	38 599	42 516	801	1 069	30 247	237 370
1955.....	36 267	38 857	867	1 358	28 396	304 023
1960.....	43 483	55 636	898	1 115	35 069	302 448
1961.....	45 162	53 128	893	1 543	40 735	259 934
1962.....	52 876	37 145	1 075	1 052	48 687	276 713
1963.....	52 969	42 997	1 021	975	49 267	210 243
1964.....	55 364	57 004	1 006	1 009	50 960	153 587
1965.....	52 192	54 840	1 043	1 196	47 053	104 101
1966.....	57 013	63 804	1 047	1 327	50 651	83 990
1967.....	55 955	62 470	1 553	1 202	49 641	77 769
1968.....	54 400	53 926	3 154	1 425	48 919	92 389
1969.....	54 213	47 449	4 853	1 524	50 898	117 794
1970.....	53 343	84 502	5 018	1 434	46 922	113 529
1971.....	63 389	109 046	6 166	1 742	52 749	123 922
1972.....	99 251	164 884	6 825	1 918	85 580	132 242
1973.....	76 903	160 971	5 674	1 502	63 792	114 588
1974.....	80 180	153 767	5 950	1 304	65 311	127 460
1975.....	76 401	152 884	5 489	1 712	67 476	161 922
1976.....	71 310	154 008	6 853	2 202	62 004	189 489
1977.....	84 772	163 486	6 634	2 534	78 405	198 966
1978.....	86 193	148 966	7 270	2 630	77 388	223 957
1979.....	76 662	84 422	6 892	2 522	75 279	237 380

(Chapter 8)

## Sea Fisheries, Tasmania

Year	Boats engaged (a)	Persons engaged (a)	Production (b)							Gross value of production (c)
			Fish				Southern rock lobster	Scallops	Abalone	
			Snoek (barracouta)	Salmon	Shark	Other				
	no.	no.	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	'000 kg	\$'000
1951-52	n.a.	n.a.	1 580	50	392	319	852	738	—	882
1952-53			1 819	61	1 010	231	1 222	1 465	—	1 210
1953-54			362	173	506	238	1 006	1 714	—	864
1954-55			673	195	301	243	1 313	2 452	—	1 112
1955-56			576	116	291	170	1 108	2 625	—	1 012
1956-57	472	958	1 100	33	235	180	954	2 664	—	1 216
1957-58	458	907	414	60	384	128	1 088	1 888	—	1 016
1958-59	438	923	644	93	360	171	1 250	2 148	—	1 328
1959-60	469	968	711	147	413	167	1 329	2 043	—	1 612
1960-61	478	1 072	373	545	439	166	1 436	2 402	—	1 920
1961-62	514	1 122	935	1 325	451	128	1 554	2 164	—	2 294
1962-63	511	1 208	512	528	377	155	1 501	2 663	—	2 254
1963-64	507	1 191	639	385	370	160	1 620	1 932	49	2 203
1964-65	503	957	915	227	299	209	1 513	1 323	225	2 686
1965-66	596	1 154	1 362	196	493	212	1 787	394	726	3 300
1966-67	618	1 200	1 037	427	455	270	1 946	341	1 999	3 653
1967-68	585	1 118	1 624	343	685	300	1 752	225	2 786	4 473
1968-69	566	1 160	1 401	174	947	248	1 700	125	2 108	4 864
1969-70	553	1 123	1 578	67	801	219	1 390	50	2 608	4 043
1970-71	529	1 090	610	201	793	335	1 607	—	3 488	5 984
1971-72	588	1 207	581	507	859	433	1 469	52	2 971	6 808
1972-73	589	1 235	915	461	497	392	1 583	515	2 172	5 739
1973-74	594	1 268	598	371	1 187	7 728	1 514	1 158	2 060	7 014
1974-75	616	1 343	760	631	651	828	1 525	1 261	2 108	6 928
1975-76	607	1 347	143	473	1 238	375	1 229	690	2 429	8 511
1976-77	640	1 439	37	r 573	1 130	413	1 117	498	2 368	r 11 662
1977-78	655	1 466	194	611	1 710	590	1 192	400	2 525	12 609
1978-79	727	1 620	38	451	1 490	626	1 305	1 077	3 100	14 636
1979-80	760	1 687	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.	n.y.a.

(a) Year ended December of the first year named.

(b) Landed at Tasmanian ports; estimated live weight.

(c) Includes crabs, squid, oysters and seaweed.

(Chapter 9)

## Principal Articles Produced in Factories, Tasmania

Year	Foodstuffs					Refined zinc
	Butter (a)	Cheese (factory and farm)	Bacon and ham (cured weight) (b)	Flour (incl.) wheatmeal for baking)	Aerated waters	
	tonnes	tonnes	tonnes	tonnes	'000 litres	tonnes
1939-40	5 380	1 470	1 313	17 137	1 650	74 012
1944-45	4 157	1 200	1 209	20 442	2 855	80 612
1949-50	5 614	428	1 007	24 714	4 510	85 122
1954-55	8 707	278	1 043	27 037	5 123	102 071
1955-56	10 378	338	1 057	25 272	5 623	105 572
1956-57	10 835	350	1 070	26 355	5 537	108 333
1957-58	11 019	382	1 073	25 981	6 346	116 977
1958-59	11 178	387	1 144	26 844	7 519	116 554
1959-60	12 079	372	1 162	28 007	8 356	119 785
1960-61	10 552	399	1 138	26 388	8 656	127 957
1961-62	12 376	641	1 149	26 356	8 828	131 140
1962-63	13 405	681	1 201	26 442	9 683	138 391
1963-64	13 984	1 358	1 185	24 868	9 938	140 835
1964-65	14 218	2 388	1 190	25 367	10 310	141 006
1965-66	14 229	2 989	1 079	25 022	11 111	146 221
1966-67	14 541	3 822	1 262	24 470	11 583	146 227
1967-68	13 999	4 724	1 302	23 957	12 029	131 872
1968-69	16 017	5 820	1 416	23 826	12 644	151 094
1969-70	16 343	5 407	1 403	21 947	13 354	170 931
1970-71	15 273	5 556	1 803	22 264	14 049	162 271
1971-72	15 318	5 923	1 984	22 488	14 402	175 798
1972-73	12 947	7 218	1 902	31 698	15 236	193 782
1973-74	12 398	8 475	1 931	34 643	15 751	182 749
1974-75	12 196	12 387	2 169	34 938	14 845	152 749
1975-76	10 762	13 332	2 356	30 691	16 219	137 637
1976-77	9 707	13 156	2 434	32 427	18 786	170 685
1977-78	7 910	13 903	2 505	32 780	20 082	161 173
1978-79	7 075	17 494	2 457	34 901	19 834	204 623
1979-80	5 461	15 431	2 094	37 269	18 361	191 683

## Principal Articles Produced in Factories, Tasmania—continued

Year	Chemicals, fertilisers, etc.			Sawn, peeled and sliced timber (c)	Miscellaneous	
	Sulphuric acid	Super- phosphate	Sulphate of ammonia		Newsprint	Electricity (d)
	tonnes	tonnes	tonnes	'000 m <sup>3</sup>	tonnes	m kW h
1939-40	14 552	33 337	—	189.7	—	612
1944-45	15 124	28 519	—	197.7	24 373	796
1949-50	42 747	69 943	—	298.2	30 961	1 062
1954-55	70 676	77 034	—	331.3	74 789	1 589
1955-56	72 310	86 671	—	355.5	80 283	1 794
1956-57	96 432	83 263	39 833	320.3	80 878	2 210
1957-58	113 701	106 420	50 546	308.1	82 386	2 338
1958-59	127 759	108 616	56 924	344.5	84 404	2 456
1959-60	129 077	104 260	58 525	400.4	89 931	2 532
1960-61	137 178	106 285	62 574	388.3	89 452	2 632
1961-62	138 636	121 143	62 319	351.6	91 199	2 733
1962-63	142 227	127 426	53 274	377.2	91 693	3 213
1963-64	161 381	134 233	43 506	403.2	93 516	3 409
1964-65	184 936	132 445	60 772	420.2	94 637	3 780
1965-66	198 551	162 441	65 135	421.2	94 707	3 896
1966-67	211 201	166 757	58 422	411.5	98 816	4 116
1967-68	185 303	145 968	13 086	413.5	94 135	3 773
1968-69	206 474	140 340	40 324	414.4	125 924	4 738
1969-70	266 449	133 245	40 563	413.7	173 314	5 140
1970-71	387 193	105 323	40 252	406.1	178 683	5 451
1971-72	558 658	104 763	41 358	412.8	181 477	5 778
1972-73	652 513	177 192	48 654	416.3	199 053	5 902
1973-74	570 156	180 458	33 191	414.3	200 852	6 010
1974-75	517 052	103 253	54 701	410.2	196 240	6 095
1975-76	466 817	57 896	23 040	373.5	206 228	6 008
1976-77	506 338	101 281	12 291	368.1	206 590	6 842
1977-78	522 154	97 012	5 292	338.5	207 621	7 179
1978-79	414 644	151 489	6 045	320.6	208 143	7 748
1979-80	302 550	132 783	1 213	355.2	221 460	7 903

(a) Includes butter equivalent of butter oil and from 1965-66 excludes farm production.

(b) Includes non-factory production. From July 1970 all weights are on a bone-in basis; earlier figures include an element of unconverted bone-out weights.

(c) Includes hardwood and softwood.

(d) Mainly output of Hydro-Electric Commission.

(NOTE: Details of production of a number of important articles cannot be published because of confidentiality.)

## Appendix A

(Chapter 9)

## Manufacturing, Tasmania

Year	Number of factories at end of year	Employment (a)			Salaries and wages paid (b) (\$'000)	Materials used (\$'000)	Value of output (c) (\$'000)	Value of production (d) (\$'000)	Value of	
		Males	Females	Persons					Land and buildings (\$'000)	Plant and machinery (\$'000)
1910.....	635	8 277	1 703	9 980	n.a.	n.a.	n.a.	n.a.	2 044	2 092
1915.....	589	7 161	1 259	8 420	1 567	4 387	8 431	3 823	2 265	2 457
1920.....	616	8 746	1 479	10 225	2 960	8 469	14 304	5 525	1 963	3 863
1924-25.....	675	9 016	1 982	10 998	3 776	6 885	15 685	7 251	4 209	13 457
1929-30.....	845	8 547	2 273	10 820	4 056	8 025	17 121	7 124	5 994	13 894
1934-35.....	926	8 321	2 234	10 555	3 204	6 260	14 446	6 316	5 390	12 138
1939-40.....	980	11 754	2 916	14 670	5 372	10 821	25 987	12 506	7 551	13 576
1940-41.....	1 002	12 341	3 498	15 839	6 119	12 377	27 735	12 584	8 474	15 098
1941-42.....	994	13 389	4 167	17 556	7 442	14 922	32 622	14 429	8 769	15 226
1942-43.....	992	13 941	4 369	18 310	8 946	17 393	37 408	16 151	9 854	16 267
1943-44.....	994	14 697	5 094	19 791	10 387	19 144	41 696	18 091	10 586	16 129
1944-45.....	1 006	14 756	4 755	19 511	10 017	19 934	42 714	17 805	10 983	15 934
1945-46.....	1 082	15 105	4 130	19 235	10 013	20 616	44 239	18 391	10 609	16 461
1946-47.....	1 169	16 186	3 751	19 937	11 276	22 650	49 139	21 335	11 356	17 000
1947-48.....	1 225	17 208	3 965	21 173	13 731	27 311	57 569	24 489	12 543	19 832
1948-49.....	1 346	18 508	4 094	22 602	16 913	34 319	73 314	32 149	14 670	24 507
1949-50.....	1 456	19 302	4 204	23 506	19 293	43 468	90 160	38 671	17 299	27 456
1950-51.....	1 486	19 454	4 373	23 827	23 475	58 290	117 249	49 229	20 701	34 312
1951-52.....	1 512	19 934	4 093	24 027	29 407	71 804	143 853	59 588	24 999	41 181
1952-53.....	1 504	19 621	3 874	23 495	31 953	67 333	142 007	60 997	29 925	45 240
1953-54.....	1 545	20 249	4 340	24 589	34 763	74 851	155 822	66 129	53 993	54 984
1954-55.....	1 597	21 045	4 407	25 452	37 727	84 930	177 202	76 228	59 206	59 758
1955-56.....	1 594	22 128	4 934	27 062	43 196	95 882	207 558	91 862	93 158	80 849
1956-57.....	1 595	22 482	5 188	27 670	47 273	101 274	220 780	97 365	112 946	89 672
1957-58.....	1 655	23 081	5 003	28 084	50 641	100 582	227 651	103 660	118 906	93 719
1958-59.....	1 666	23 504	4 920	28 424	51 656	103 093	236 587	108 602	123 660	96 451
1959-60.....	1 683	24 408	5 254	29 662	57 573	119 822	268 050	120 392	144 024	107 315
1960-61.....	1 766	24 811	5 347	30 158	60 659	122 508	275 902	124 892	147 099	112 632
1961-62.....	1 760	24 742	5 328	30 070	61 440	126 128	283 547	127 874	159 149	121 589
1962-63.....	1 764	25 453	5 302	30 755	64 837	131 100	303 920	142 033	163 919	138 159
1963-64.....	1 746	26 221	5 612	31 833	70 582	154 613	341 065	152 571	168 403	141 651
1964-65.....	1 805	26 768	5 812	32 580	76 515	175 920	381 549	167 251	209 010	155 336
1965-66.....	1 792	28 041	6 274	34 315	82 963	188 678	404 581	175 606	211 923	158 672
1966-67.....	1 771	28 364	6 515	34 879	90 756	201 027	437 964	194 571	233 983	169 159
1967-68.....	1 797	28 550	6 628	35 178	96 236	203 084	445 076	198 019	263 364	184 683

(a) Commencing with 1927-28, the number of persons employed is the average over the whole year; prior to the date the number represents the average over the period of operation.

(b) Excludes amounts drawn by working proprietors.

(c) Value of goods manufactured and work done.

(d) Value of output less recorded costs of manufacture other than labour.

(Chapter 9)

## Economic Censuses: Manufacturing, Tasmania (a)

Year (b)	Establishments operating at 30 June	Employment (average over whole year) (c)			Wages and salaries (\$'000)	Turnover (d) (\$'000)	Purchases, transfers in and selected expenses (e) (\$'000)	Value added (f) (\$'000)	Fixed capital expenditure (g) (\$'000)
		Males	Females	Persons					
	no.	no.	no.	no.	\$'000	\$'000	\$'000	\$'000	\$'000
1968-69.....	951	24 892	6 182	31 074	95 065	487 109	301 739	197 464	35 080
1969-70.....	945	25 371	6 389	31 760	102 104	541 636	317 546	226 083	49 443
1971-72.....	933	24 856	6 151	31 007	119 411	595 612	359 300	245 068	25 944
1972-73.....	912	24 668	6 016	30 684	130 703	678 763	394 628	283 420	24 893
1973-74.....	935	25 203	6 324	31 527	161 386	818 049	494 785	340 250	24 798
1974-75(b).....	628	23 699	5 153	28 852	194 883	905 656	558 632	402 255	53 146
1975-76.....	667	22 827	4 926	27 753	211 327	1 029 579	577 393	456 029	43 936
1976-77.....	617	23 042	4 724	27 766	246 014	1 199 311	694 445	533 288	34 472
1977-78.....	599	22 022	4 944	26 966	258 341	1 245 979	742 171	497 979	47 243
1978-79.....	552	21 386	4 680	26 066	266 099	1 401 463	861 690	549 372	77 116

(a) Details are not comparable with those contained in the preceding table.

(b) No census was conducted in 1970-71. From 1974-75 figures exclude details for single establishment enterprises with less than four persons employed.

(c) Includes working proprietors and employees at separately located administrative and ancillary units.

(d) Turnover plus increase (or less decrease) in the value of stocks less purchases, transfers in and selected expenses.

(e) Includes transfers in of goods from other establishments of the enterprise, charges for commission and sub-contract work, repair and maintenance expenses, outward freight and cartage, motor vehicle running expenses and sales commission payments.

(f) Comprises sales of goods, transfers out of goods to establishments of the same enterprise, bounties and subsidies on production, all other operating revenue from outside the enterprise and capital work done for own use, rental or lease.

(g) Outlay on fixed tangible assets less disposals.

(Chapter 9)

## Hydro-Electric Commission, Tasmania

Year	Installed generator capacity (a)	Number of retail consumers	Consumption per retail consumer	Gross revenue	Working expenses and other charges
	kW	no.	kWh	\$'000	\$'000
1929-30	49 000	n.a.	n.a.	692	636
1934-35	54 250	n.a.	n.a.	814	754
1939-40	104 500	n.a.	n.a.	1 212	1 172
1944-45	160 500	55 073	3 110	1 776	1 588
1949-50	184 500	75 927	4 201	2 938	2 926
1959-60	541 150	117 266	6 480	14 570	14 932
1964-65	856 550	131 593	7 779	25 009	23 500
1965-66	807 550	134 679	7 958	26 293	25 569
1966-67	849 150	135 941	8 571	28 299	27 058
1967-68	945 300	139 886	8 247	27 627	28 607
1968-69	1 005 600	143 551	8 712	33 638	31 824
1969-70	1 031 600	146 958	9 059	37 296	35 095
1970-71	1 281 200	149 911	9 252	40 151	40 070
1971-72	1 309 200	152 934	9 782	46 286	46 278
1972-73	1 352 400	156 570	9 876	49 511	49 297
1973-74	1 342 400	160 307	10 165	52 730	54 026
1974-75	1 442 400	163 479	10 864	62 295	61 870
1975-76	1 462 400	167 507	11 191	72 699	72 312
1976-77	1 492 400	171 847	12 071	80 372	80 292
1977-78	1 636 400	176 005	12 529	95 519	95 269
1978-79	1 780 400	179 861	12 878	109 130	108 930
1979-80	1 780 400	n.y.a.	n.y.a.	120 505	119 993

(a) Excludes King and Flinders Islands.

(Chapter 10)

Value of Retail Sales by Commodity Groups, Tasmania  
(\$ Million)

Year	Groceries	Butchers' meat	Other food (a)	Beer, wine, spirits (b)	Clothing drapery piece-goods, footwear	Domestic hardware (c)	Electrical goods (d)	Furniture floor coverings	Other goods (e)	Total (excl. motor vehicles, etc.)
1952-53 (f)	17.3	9.1	11.9	10.7	25.7	3.1	4.6	4.9	16.3	103.6
1956-57 (f)	23.4	11.1	15.1	14.8	30.4	3.3	6.3	6.4	20.3	131.1
1961-62 (f)	28.6	13.9	20.0	17.0	35.3	4.1	10.7	7.2	29.3	166.1
1962-63	29.3	14.9	21.4	16.9	36.0	4.4	11.7	7.8	30.5	172.9
1963-64	31.6	15.5	20.6	18.5	38.4	4.4	11.5	7.9	31.8	180.2
1964-65	33.6	17.1	21.9	18.9	40.6	4.4	11.3	8.5	34.7	191.0
1965-66	35.2	17.8	22.7	20.3	41.6	4.5	11.2	8.7	36.3	198.3
1966-67	36.5	19.4	24.2	23.3	45.5	5.1	11.7	10.1	39.2	215.0
1967-68	37.3	19.9	26.1	25.0	48.9	5.5	12.4	11.2	41.6	227.9
1968-69 (f)	48.7	20.7	23.1	30.9	49.5	8.8	13.4	12.6	49.9	257.6
1969-70	41.7	21.0	30.7	28.7	62.2	6.1	13.3	12.9	49.4	256.0
1970-71	45.2	21.3	32.6	30.7	55.6	6.7	13.6	13.5	52.9	272.1
1971-72	50.0	22.2	33.9	32.4	59.7	7.5	15.4	14.4	55.8	291.3
1972-73	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	319.5
1973-74 (f)	67.0	28.9	39.2	50.2	83.8	12.7	25.2	23.4	71.9	402.3
1974-75	76.7	31.3	47.2	61.7	100.3	17.1	36.1	28.9	86.1	485.4
1975-76	87.3	31.2	49.7	68.8	101.6	22.1	48.3	31.7	91.6	532.3
1976-77	110.4	35.7	58.0	77.5	117.3	24.5	56.4	34.6	103.6	618.0
1977-78	120.8	37.6	64.0	91.6	133.1	29.0	53.1	37.8	118.4	685.4
1978-79	132.0	48.2	72.8	100.5	141.2	29.5	53.2	38.8	134.3	750.5

(a) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread.

(b) Excludes sales from licensed clubs.

(c) Excludes basic building materials (e.g. timber, roofing tiles, etc.), builders' hardware and supplies.

(d) Includes radios, televisions and accessories, musical instruments, domestic refrigerators, etc.

(e) Includes tobacco, cigarettes, newspapers, books, stationery, chemists' goods, jewellery, etc.

(f) Census figures.

(Chapter 10)

## Value of Trade by Sea and Air and Vessels Entered and Cleared Tasmanian Ports

Year	Imports				Exports				Vessels entered Tasmanian ports	
	By sea		By air	Total	By sea		By air	Total	Overseas and inter-state (a)	
	Overseas	Interstate	Interstate		Overseas	Interstate	Interstate		no.	'000 net tons
	\$'000.	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000		
1830.....	n.a.	n.a.		510	n.a.	n.a.		292	101	27
1840.....	n.a.	n.a.		1 976	n.a.	n.a.		1 734	492	85
1850.....	n.a.	n.a.		1 318	n.a.	n.a.		1 288	674	104
1860.....	1 686	450		2 136	1 544	380		1 924	806	116
1870.....	698	888		1 586	562	736		1 298	613	106
1880.....	738	2 000		2 738	1 668	1 456		3 024	654	205
1890.....	1 594	2 202		3 796	792	2 182		2 974	746	476
1900.....	1 402	2 746		4 148	3 078	2 144		5 222	741	619
1910.....	1 662	(b)		n.a.	1 040	(b)		n.a.	979	1 211
1919-20.....	1 626	(b)		n.a.	4 022	(b)		n.a.	841	632
1929-30.....	3 668	16 028		19 696	4 978	13 198		18 176	1 076	1 390
1930-31.....	1 582	12 878		14 460	4 214	9 754		13 968	992	1 319
1931-32.....	1 130	11 938		13 068	4 106	9 980		14 086	980	1 307
1932-33.....	1 128	12 464		13 592	3 582	9 790		13 372	1 030	1 461
1933-34.....	1 274	13 582	n.a.	14 856	4 766	10 254	n.a.	15 020	1 066	1 547
1934-35.....	1 476	14 452		15 928	4 318	11 844		16 162	1 128	1 610
1935-36.....	2 498	17 134		19 632	5 502	13 116		18 618	1 191	1 977
1936-37.....	2 586	18 858		21 444	6 822	14 376		21 198	1 317	2 093
1937-38.....	3 858	19 854		23 712	5 774	16 500		22 274	1 377	2 202
1938-39.....	2 838	20 166		23 004	6 796	17 670		24 466	1 384	2 231
1939-40.....	3 188	21 780		24 968	4 852	20 954		25 806	1 243	1 512
1940-41.....	2 364	21 876		24 240	3 120	24 052		27 172	1 147	1 264
1941-42.....	1 918	24 276		26 194	3 746	28 566		32 312	1 031	1 030
1942-43.....	2 300	26 236		28 536	1 770	30 680		32 450	873	760
1943-44.....	2 384	26 162		28 546	2 298	35 288		37 586	804	796
1944-45.....	1 664	27 796		29 460	5 062	36 708		41 770	760	732
1945-46.....	2 614	29 400		32 014	7 224	33 040		40 264	728	833
1946-47.....	3 626	37 810		41 436	10 162	32 932		43 094	751	957
1947-48.....	8 564	44 000		52 564	18 566	35 066		53 632	787	1 106
1948-49.....	12 512	46 674		59 186	24 980	37 064		62 044	805	1 125
1949-50.....	18 704	51 218	(c) 10 670	80 592	29 936	42 672	(c) 3 996	76 604	862	1 183
1950-51.....	25 058	60 636	18 326	104 020	48 514	53 740	6 392	108 646	905	1 279
1951-52.....	41 422	76 024	20 474	137 920	37 024	71 684	6 018	114 726	902	1 323
1952-53.....	26 632	76 658	19 936	123 226	43 696	72 804	11 568	128 068	1 012	1 480
1953-54.....	26 098	87 438	22 164	135 700	35 466	81 488	13 580	130 534	1 060	1 508
1954-55.....	30 258	89 958	19 148	139 364	37 524	85 376	14 494	137 394	1 081	1 620
1955-56.....	24 884	99 608	21 166	145 658	40 608	100 630	18 762	160 000	1 030	1 586
1956-57.....	27 764	105 788	20 020	153 572	45 004	108 654	18 112	171 770	1 161	1 737
1957-58.....	25 466	113 636	19 122	158 224	44 506	109 652	18 354	172 512	1 241	1 872
1958-59.....	26 374	121 138	19 718	167 230	43 932	114 424	17 584	175 940	1 257	1 966
1959-60.....	27 606	130 014	19 210	176 830	47 730	137 530	20 818	206 078	1 308	2 287
1960-61.....	37 208	141 086	19 356	197 650	42 588	143 036	21 944	207 568	1 354	2 546
1961-62.....	26 788	141 776	18 000	186 564	57 196	140 794	23 298	221 288	1 533	3 042
1962-63.....	35 746	150 620	18 158	204 524	66 792	146 454	21 602	234 848	1 614	3 474
1963-64.....	35 032	167 964	19 840	222 836	78 318	173 590	23 424	275 332	1 508	3 346
1964-65.....	35 717	170 963	20 819	227 449	87 315	193 371	25 770	306 456	1 472	3 412
1965-66.....	43 585	192 732	21 123	257 441	92 007	212 785	25 575	330 367	1 645	3 887
1966-67.....	51 376	209 456	20 311	281 143	88 834	224 975	25 680	339 490	(d) 1 684	(d) 4 085
1967-68.....	45 024	220 065	20 590	285 679	76 888	233 694	26 941	337 524	1 676	4 102
1968-69.....	37 509	241 398	21 051	299 958	102 061	265 476	25 825	393 362	1 795	4 645
1969-70.....	46 998	257 441	20 551	324 989	143 470	286 083	26 287	455 840	1 759	5 574
1970-71.....	45 719	269 022	19 777	334 519	143 198	277 669	27 103	447 970	1 639	5 338
1971-72.....	39 749	281 576	20 622	341 947	178 950	302 608	29 374	510 932	1 754	5 937
1972-73.....	45 045	289 862	21 238	356 145	218 712	320 910	30 626	570 247	1 788	7 239
1973-74.....	69 277	357 805	24 760	451 843	259 745	404 382	34 566	698 692	1 631	7 225
1974-75.....	100 616	402 081	26 850	529 547	226 154	379 933	31 699	637 786	1 611	6 820
1975-76.....	76 262	503 497	27 882	607 641	250 580	441 391	36 280	728 251	1 536	6 733
1976-77.....	94 622	564 231	30 909	689 762	338 657	485 850	35 160	859 667	1 592	7 258
1977-78.....	115 778	594 793	39 388	749 960	381 942	594 441	38 206	1 014 589	1 528	6 992

(a) In this section each vessel is recorded as an entry at the first Tasmanian port of call only; intrastate movements are excluded.

(b) Collection discontinued until 1922-23.

(c) Not collected before 1949-50.

(d) From 1966-67 not comparable with previous years; details are now confined to vessels of over 200 registered net tons engaged solely in trade.

(Chapter 11)

## Overseas and Interstate Exports of Selected Commodities, Tasmania

Year	Butter (incl. butter oil)		Fresh fruit— apples and pears		Meat		Cheese		Wool, greasy (a)	
	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000	tonnes	\$'000
1945-46	1 293	406	66 820	1 894	186	34	612	112	4 113	1 438
1946-47	1 340	688	19 908	1 028	312	83	993	180	5 275	2 706
1947-48	1 926	798	55 565	4 204	282	44	273	66	4 446	4 206
1948-49	2 475	1 268	31 481	2 366	789	122	181	41	6 365	6 758
1949-50	2 179	1 278	56 911	4 348	1 151	369	113	29	4 128	6 202
1950-51	1 958	1 173	64 841	6 828	915	302	63	17	5 446	18 688
1951-52	2 239	1 266	56 627	7 410	1 103	475	120	44	6 689	9 366
1952-53	2 397	1 802	77 288	11 578	1 753	818	39	18	7 643	12 030
1953-54	2 043	1 600	77 652	10 135	658	349	39	18	7 018	11 314
1954-55	3 944	3 026	72 112	8 950	1 676	814	73	39	8 011	12 190
1955-56	4 988	3 463	92 569	11 498	2 470	1 076	36	23	8 387	11 140
1956-57	6 101	3 452	58 836	7 936	2 074	883	102	73	9 392	16 198
1957-58	5 939	3 420	96 260	14 664	2 996	1 190	101	45	10 731	14 260
1958-59	7 065	4 828	87 781	11 338	5 469	2 415	69	51	11 415	12 106
1959-60	7 864	5 390	80 683	9 490	9 225	3 801	90	64	12 689	15 254
1960-61	5 419	3 298	92 730	11 226	6 896	3 212	60	47	11 068	12 560
1961-62	7 572	3 942	122 417	15 572	7 754	3 250	121	50	12 341	14 206
1962-63	8 597	4 368	108 438	17 508	9 933	4 737	578	269	11 919	15 338
1963-64	8 315	4 372	135 205	19 454	11 018	5 505	895	328	11 378	17 604
1964-65	10 374	5 914	99 410	14 260	12 881	6 645	1 707	761	13 756	16 593
1965-66	8 878	5 214	134 482	20 651	12 749	7 038	2 887	1 493	15 442	20 155
1966-67	9 140	5 259	96 085	11 872	13 727	7 939	3 530	1 642	16 238	20 373
1967-68	8 992	5 107	115 873	14 647	11 345	7 042	4 190	1 854	13 994	15 041
1968-69	9 243	5 129	96 242	13 154	12 910	7 989	1 930	884	15 798	18 592
1969-70	12 611	6 950	109 382	14 905	17 084	11 774	7 267	2 957	16 512	17 821
1970-71	10 664	5 954	96 670	13 474	15 755	10 706	6 259	2 589	17 145	14 350
1971-72	9 829	8 067	74 848	11 092	21 463	14 161	6 816	3 875	20 413	17 180
1972-73	7 437	6 104	84 066	11 566	23 061	20 368	6 656	4 085	17 735	34 579
1973-74	8 269	6 441	92 116	16 458	22 167	22 507	7 730	5 930	16 963	38 319
1974-75	5 012	4 460	57 473	10 261	18 456	12 237	10 386	7 922	15 947	26 640
1975-76	9 720	7 527	47 114	8 756	20 883	17 192	9 026	7 633	17 435	31 232
1976-77	4 363	3 851	24 847	5 732	22 951	20 281	14 552	12 317	16 204	33 685
1977-78	6 248	5 941	42 257	11 092	21 056	21 659	15 222	14 409	10 805	24 048

(Chapter 11)

## Overseas and Interstate Exports of Selected Commodities, Tasmania—continued

Year	Sheep skins (with and without wool)		Textile yarn and fabrics	Refined zinc		Ores and concentrates	Timber (dressed and undressed)		Woodchips	
	Quantity	Value	Value	Quantity	Value	Value	Quantity	Value	Quantity	Value
	tonnes	\$'000	\$'000	tonnes	\$'000	\$'000	m <sup>3</sup>	\$'000	\$'000	\$'000
1945-46	1 890	326	4 599	75 454	4 214	1 668	73 206	1 132	—	—
1946-47	1 811	480	4 607	80 378	4 674	2 298	75 344	1 228	—	—
1947-48	963	452	5 681	66 411	4 906	3 074	96 188	1 584	—	—
1948-49	1 205	564	6 688	78 667	8 832	3 832	116 094	2 104	—	—
1949-50	1 500	816	5 580	81 999	9 964	4 076	146 625	2 930	—	—
1950-51	1 014	1 688	9 266	80 836	15 054	5 704	135 668	3 230	—	—
1951-52	1 434	1 232	7 498	77 090	18 606	11 714	134 604	4 428	—	—
1952-53	1 512	1 020	11 572	91 557	19 342	9 722	122 230	5 112	—	—
1953-54	1 333	1 098	13 552	97 593	17 222	8 544	135 751	6 700	—	—
1954-55	2 230	1 590	12 476	87 746	16 574	8 138	147 389	7 156	—	—
1955-56	1 873	1 356	14 674	100 611	19 888	10 836	140 938	6 570	—	—
1956-57	2 122	1 796	15 766	105 314	19 662	10 700	146 502	6 874	—	—
1957-58	2 138	1 674	16 112	105 541	18 190	8 088	132 242	4 616	—	—
1958-59	2 565	1 288	14 166	116 271	20 054	4 824	153 378	6 844	—	—
1959-60	3 216	2 078	17 524	115 680	22 922	5 952	177 931	8 952	—	—
1960-61	3 071	1 786	19 188	109 664	21 020	6 760	149 657	9 554	—	—
1961-62	3 050	1 892	21 278	133 012	23 680	6 030	134 033	8 588	—	—
1962-63	2 885	1 904	19 842	136 302	23 778	6 338	142 979	9 858	—	—
1963-64	3 359	2 844	21 918	134 201	27 910	9 102	168 480	11 176	—	—
1964-65	2 676	1 953	24 139	141 263	37 327	9 570	189 832	12 811	—	—
1965-66	3 268	2 465	24 077	137 257	38 331	11 302	174 297	12 145	—	—
1966-67	3 402	2 456	24 102	155 273	41 249	12 560	187 474	13 672	—	—
1967-68	2 722	1 369	25 487	120 312	33 106	17 816	183 817	13 492	—	—
1968-69	3 988	2 148	27 563	139 479	34 006	44 018	194 936	15 329	—	—
1969-70	3 236	1 790	27 784	163 847	42 625	63 478	207 242	16 238	—	—
1970-71	3 710	1 684	28 425	142 755	38 163	81 604	200 583	17 201	30	438
1971-72	3 765	1 799	29 938	194 259	55 149	88 777	202 331	17 385	301	4 354
1972-73	3 618	3 280	31 680	208 349	63 707	87 543	224 828	27 970	1 156	16 833
1973-74	2 303	2 926	41 174	190 293	77 143	94 381	270 248	22 556	2 138	31 019
1974-75	2 816	2 258	31 454	139 253	74 298	91 240	213 428	30 636	2 031	35 212
1975-76	2 943	2 413	41 656	138 243	74 926	92 588	238 440	25 867	1 734	35 524
1976-77	2 334	2 765	35 811	162 001	98 318	144 947	313 227	37 083	n.p.	n.p.
1977-78	2 565	3 565	33 285	167 870	87 129	164 014	260 738	38 282	n.p.	n.p.

(a) Excludes greasy wool on exported skins.

## Appendix A

(Chapter 11)

## Motor Vehicle Registrations, Tasmania (a)

Year	Motor vehicles on the register at end of year					New motor vehicles registered during year			
	Motor cars and station wagons		Commercial vehicles ('000)	Motor cycles ('000)	Total ('000)	Motor cars and station wagons	Commercial vehicles	Motor cycles	Total
	Number ('000)	Persons per vehicle registered							
1924-25 .....	5.8	36.9	(b) 0.8	2.7	9.3	n.a.	n.a.	n.a.	n.a.
1929-30 .....	12.5	17.6	(c) 2.2	4.8	19.5	1 627	(c) 352	939	3 118
1934-35 .....	12.9	17.8	3.0	3.9	19.8	982	422	171	1 575
1939-40 .....	17.6	13.6	5.2	3.4	26.2	1 400	540	176	2 116
1949-50 .....	25.3	10.9	12.9	4.9	43.2	3 311	1 565	886	5 762
1950-51 .....	28.8	9.9	15.1	5.3	49.2	4 187	2 319	960	7 466
1951-52 .....	32.5	9.1	16.8	5.7	55.1	4 267	2 073	938	7 278
1952-53 .....	35.4	8.6	19.4	5.7	60.5	3 368	1 724	474	5 566
1953-54 .....	40.0	7.7	19.7	5.6	65.4	4 178	1 896	450	7 064
1954-55 .....	44.9	7.0	21.5	5.3	71.7	5 738	2 285	417	8 440
1955-56 .....	48.0	6.6	21.9	4.8	74.7	5 457	2 179	332	7 968
1956-57 .....	51.7	6.3	22.6	4.4	78.6	5 309	1 988	340	7 637
1957-58 .....	55.9	6.0	23.9	4.0	83.8	5 337	1 944	225	7 506
1958-59 .....	59.1	5.7	25.0	3.6	87.7	5 362	2 113	176	7 651
1959-60 .....	63.7	5.4	26.4	3.1	93.2	6 527	2 115	96	8 738
1960-61 .....	68.1	5.1	26.7	2.6	97.4	6 723	2 058	61	8 842
1961-62 .....	72.8	4.9	27.4	2.4	102.6	6 931	1 778	59	8 768
1962-63 .....	77.9	4.6	27.5	1.9	107.3	9 003	1 986	52	11 041
1963-64 .....	84.4	4.3	28.0	1.7	114.1	10 268	2 343	53	12 664
1964-65 .....	91.3	4.0	28.9	1.5	121.7	10 522	2 389	69	12 980
1965-66 .....	96.8	3.8	29.7	1.5	128.0	10 133	2 878	207	13 218
1966-67 .....	101.7	3.7	30.2	1.6	133.5	10 390	2 611	380	13 381
1967-68 .....	107.7	3.5	31.1	2.2	141.0	11 738	2 412	751	14 901
1968-69 .....	113.7	3.4	32.2	2.8	148.7	10 845	2 529	781	14 155
1969-70 .....	118.6	3.3	32.6	3.1	154.3	11 399	2 456	799	14 654
1970-71 .....	124.9	3.1	32.9	3.5	161.3	11 792	2 550	794	15 136
1971-72 .....	130.2	3.0	33.8	3.8	167.8	11 961	2 492	978	15 431
1972-73 .....	135.4	2.9	34.6	4.5	174.5	12 970	2 813	1 343	17 126
1973-74 .....	141.2	2.8	35.3	6.1	182.6	13 674	2 846	2 600	19 120
1974-75 .....	150.3	2.7	36.6	7.4	194.3	16 097	3 980	2 749	22 826
1975-76 .....	156.9	2.6	39.1	6.8	202.8	14 410	3 971	1 831	20 212
1976-77 .....	162.7	2.5	40.5	6.2	209.4	14 520	4 260	1 428	20 208
1977-78 .....	171.9	2.4	41.2	5.0	218.1	13 884	4 170	972	19 026
1978-79 .....	178.8	2.3	42.9	4.8	226.6	13 928	3 401	892	18 221
1979-80 .....	181.7	2.3	44.4	4.7	230.9	13 333	3 454	1 089	17 876

(a) Includes State Government and Commonwealth Government-owned vehicles but excludes those belonging to the Defence Services.

(b) Trucks only.

(c) From 1929-30 includes trucks, utilities, panel vans and omnibuses.

(Chapter 11)

## Motor Vehicles on Register and Traffic Accidents, Tasmania

Year	Motor vehicles on the register at end of year (a)		Traffic accidents involving casualties					
	Number ('000)	Persons per vehicle registered	Accidents		Persons			
			Number	Per 10 000 vehicles registered (b)	Killed		Injured	
					Number	Per 10 000 vehicles registered (b)	Number	Per 10 000 vehicles registered (b)
1949-50 .....	43.2	6.4	969	242	64	16.0	1 154	288
1954-55 .....	71.7	4.4	864	127	57	8.3	1 111	163
1959-60 .....	93.2	3.7	743	82	79	8.7	1 004	111
1960-61 .....	97.4	3.6	844	89	75	7.9	1 157	121
1961-62 .....	102.6	3.5	872	87	72	7.2	1 207	121
1962-63 .....	107.3	3.4	919	87	67	6.4	1 354	129
1963-64 .....	114.1	3.2	1 118	101	80	7.2	1 656	150
1964-65 .....	121.7	3.0	1 180	100	97	8.2	1 692	143
1965-66 .....	128.0	2.9	1 291	103	88	7.0	1 955	157
1966-67 .....	133.5	2.8	1 356	104	102	7.8	2 081	159
1967-68 .....	141.0	2.7	1 268	92	112	8.2	1 990	145
1968-69 .....	148.7	2.6	1 400	97	122	8.4	2 228	154
1969-70 .....	154.3	2.5	1 413	93	122	8.0	2 268	150
1970-71 .....	161.3	2.4	1 396	89	124	7.9	2 031	129
1971-72 .....	167.8	2.3	1 371	83	118	7.2	1 984	120
1972-73 .....	174.5	2.3	1 423	83	83	4.8	2 052	119
1973-74 .....	182.6	2.2	1 454	81	126	7.0	2 046	114
1974-75 .....	194.3	2.1	1 466	77	120	6.3	2 061	108
1975-76 .....	202.8	2.0	1 502	74	107	5.3	2 160	107
1976-77 .....	209.4	2.0	1 606	77	103	4.9	2 314	110
1977-78 .....	218.1	1.9	1 674	78	118	5.5	2 402	112
1978-79 .....	226.6	1.8	1 537	69	98	4.4	2 113	95
1979-80 .....	230.9	1.8	1 510	65	77	3.3	2 140	93

(a) Includes cars, commercial vehicles, motor cycles and Commonwealth-owned vehicles other than Defence Services' vehicles.

(b) Based on average number of motor vehicles (including motor cycles) on the register.



(Chapter 11)

## Metropolitan Transport Trust Passenger Services, Tasmania

Year	Metropolitan Transport Trust (a)						Revenue (b)	Expenditure (c)
	Hobart and Launceston services							
	Route kilometres open for traffic	Hobart		Launceston				
		Vehicle kilometres	Passenger journeys	Vehicle kilometres	Passenger journeys			
		daily average	daily average	daily average	daily average	\$'000	\$'000	
1955-56 .....	121	10 602	50 028	4 060	18 006	1 304	1 690	
1960-61 .....	198	16 964	49 946	5 058	17 462	1 997	2 586	
1961-62 .....	203	17 022	48 994	5 055	17 217	1 955	2 629	
1962-63 .....	208	16 732	48 051	4 736	16 279	1 905	2 537	
1963-64 .....	222	17 537	47 554	4 775	15 731	1 882	2 584	
1964-65 .....	224	17 566	45 985	4 598	15 183	1 829	2 606	
1965-66 .....	243	17 239	43 383	4 760	14 767	1 964	2 749	
1966-67 .....	248	17 323	42 967	4 843	14 728	2 124	3 008	
1967-68 .....	259	17 408	41 803	4 947	13 953	2 158	3 122	
1968-69 .....	286	17 745	40 675	4 730	13 365	2 270	3 250	
1969-70 .....	290	17 886	39 932	4 801	13 018	2 332	3 358	
1970-71 .....	290	18 055	40 058	4 633	12 521	2 321	3 741	
1971-72 .....	291	17 703	37 584	4 585	11 708	2 639	3 949	
1972-73 .....	308	17 106	36 572	4 530	11 397	2 659	4 333	
1973-74 .....	314	17 585	38 027	4 604	11 988	2 751	5 283	
1974-75 .....	364	19 031	40 791	4 650	12 055	2 916	8 299	
1975-76 .....	357	19 850	40 646	4 704	11 969	3 000	8 084	
1976-77 .....	358	20 791	39 507	4 219	11 283	2 862	8 945	
1977-78 .....	365	21 405	39 314	4 269	10 767	3 547	10 151	
1978-79 .....	366	20 685	34 870	4 148	9 552	4 186	10 672	

(a) Includes tram, omnibus and trolley-bus services originally under Municipal control but taken over by Metropolitan Transport Trust on 1.7.55. Trams ceased operating: Hobart 21.10.60; Launceston 13.12.52.

(b) Prior to 1955-56 includes government grants; see note (a) above.

(c) Includes interest, redemption and depreciation.

(Chapter 11)

## Government Railways, Tasmania

Year	Kilometres open	Revenue train kilometres run	Passenger journeys	Goods and livestock carried	Gross revenue (a)	Working expenses (b)
	km	'000 km	'000	'000 tonnes	\$'000	\$'000
1880 .....	72	180	103	21	48	34
1885 .....	138	278	159	29	62	72
1890 (c) .....	565	890	464	143	212	172
1895 .....	676	1 172	527	207	300	240
1900 .....	707	1 313	683	313	406	320
1904-05 .....	745	1 522	824	400	488	344
1909-10 .....	756	1 706	1 650	447	568	424
1914-15 .....	858	1 617	1 751	415	646	452
1919-20 .....	1 012	2 039	2 268	584	1 012	780
1924-25 .....	1 083	2 187	2 656	702	1 096	1 064
1929-30 .....	1 093	2 420	2 243	642	1 014	1 070
1934-35 .....	1 038	1 979	2 133	689	800	944
1939-40 .....	1 036	3 322	2 412	893	1 072	1 374
1944-45 .....	1 033	3 542	3 261	939	1 800	2 334
1949-50 .....	987	3 347	3 230	782	2 098	3 456
1959-60 .....	866	2 494	2 292	1 210	5 616	6 224
1964-65 .....	805	2 047	1 340	1 109	5 580	6 644
1965-66 .....	805	2 065	1 304	1 089	5 985	6 934
1966-67 .....	805	2 052	1 197	1 096	6 588	7 707
1967-68 .....	805	2 007	1 087	1 181	6 587	8 103
1968-69 .....	805	1 926	1 045	1 262	6 947	8 461
1969-70 .....	805	1 899	907	1 278	6 920	8 391
1970-71 .....	805	1 764	871	1 220	5 867	9 222
1971-72 .....	805	1 767	785	1 299	6 123	9 726
1972-73 .....	816	1 960	752	1 554	6 834	11 012
1973-74 .....	841	2 153	693	1 828	7 674	14 465
1974-75 .....	851	1 983	429	1 731	8 265	18 604
1975-76 (d) .....	849	1 748	151	1 610	8 048	20 611
1976-77 .....	851	1 667	140	1 644	8 780	21 812

(a) Excludes government grants.

(b) Excludes provision for depreciation and interest.

(c) The Hobart-Launceston line was constructed and operated by the Tasmanian Main Line Railway Coy. Ltd. until 1890, when the line was taken over by the Tasmanian Government Railways.

(d) The Tasmanian Government Railways were taken over by the Australian National Railways Commission from 1 July 1975.

## Appendix A

(Chapter 11)

## Postal Services, Tasmania

Year	Mail posted in Tasmania or received from overseas				Money orders				Postal notes and postal orders (a)			
					Issued		Paid		Issued		Paid	
	Letters and post-cards	News-papers and packets	Parcels	Registered articles	Number	Value	Number	Value	Number	Value	Number	Value
	'000	'000	'000	'000	'000	'\$000	'000	'\$000	'000	'\$000	'000	'\$000
1929-30	39 956	7 128	198	307	124	1 104	106	954	452	314	2 730	2 098
1934-35	35 746	5 405	121	253	103	1 006	97	958	520	340	2 998	1 760
1939-40	33 874	5 525	132	314	126	1 372	113	1 278	582	418	3 236	1 970
1944-45	37 804	5 885	350	621	131	1 962	115	1 784	557	402	3 966	2 522
1949-50	50 038	8 440	368	674	167	2 428	151	2 218	670	514	6 967	4 270
1954-55	42 999	9 107	268	625	218	3 740	199	3 338	522	432	1 740	1 614
1955-56	43 329	9 531	266	655	231	3 800	305	5 342	534	440	1 475	1 450
1956-57	43 690	9 882	236	611	237	4 186	230	4 148	472	392	1 071	976
1957-58	44 306	9 564	258	556	253	4 338	217	3 862	459	396	755	680
1958-59	46 741	9 553	257	512	264	4 316	189	3 664	436	394	504	458
1959-60	43 020	9 629	233	456	264	4 358	198	3 744	433	402	335	292
1960-61	43 242	9 432	231	404	260	4 564	203	3 978	401	382	232	226
1961-62	42 603	9 714	242	390	(b) 284	(b) 6 792	(b) 221	(b) 6 160	390	376	218	216
1962-63	45 202	9 183	237	379	307	7 932	242	7 266	394	384	247	240
1963-64	47 452	9 340	232	371	342	8 548	353	7 852	388	390	208	212
1964-65	49 108	9 549	263	371	366	9 356	363	8 768	368	378	206	212
1965-66	51 710	10 309	288	375	353	11 576	274	10 902	356	384	206	213
1966-67	55 894	10 531	302	379	364	12 690	298	12 042	344	467	208	268
1967-68	55 273	10 141	303	349	322	13 468	266	12 727	350	599	201	551
1968-69	56 516	9 425	282	325	(c) 271	(c) 5 870	(c) 216	(c) 5 220	378	731	212	448
1969-70	58 824	8 953	300	312	265	5 229	211	4 516	428	871	223	512
1970-71	57 916	8 640	353	313	214	4 624	167	4 257	496	1 295	276	784
1971-72	54 780	6 773	352	268	166	4 335	128	3 722	498	1 514	263	942
1972-73	63 187		358	228	165	4 416	128	3 826	505	1 605	285	1 078
1973-74	63 272		289	203	149	4 629	115	3 960	507	1 824	288	1 188
1974-75	59 644		308	193	152	5 970	116	4 970	484	1 945	271	1 239
1975-76	44 829	5 528	220	132	129	6 418	100	5 489	334	1 504	178	877
1976-77	45 406	5 627	310	126	128	7 117	119	6 006	257	1 215	127	661
Postal money orders												
					Issued		Paid					
					No.	Value	No.	Value				
					'000	'\$000	'000	'\$000				
1977-78	48 690	7 569	342	124	251	9 898	n.a.	8 138				
1978-79	51 828	12 252	379	121	330	13 209	n.a.	10 066				

(a) On 1 June 1966 Postal Notes were replaced by Postal Orders. Until September 1967 the highest denomination available was \$4. In October 1967 denominations of \$5, \$6, \$7 and \$8 were introduced, followed in October 1970 by denominations of \$9 and \$10. From 21/11/1977, postal orders and money orders were replaced by postal money orders. (b) From 1961-62 to 1967-68 includes official Money Orders used in bringing to account telephone account collections and War Service Homes repayments. (c) The practice referred to in note (b) above was discontinued towards the end of 1967-68.

(Chapter 11)

## Telecommunication, Radiocommunication, Broadcasting and Television, Tasmania

Year	Telegrams		Telephones			Radiocommunication, broadcasting and television		
	Despatched to and received from other countries	Despatched to places within Australia	Telephone exchanges	Telephone services connected at end of period		Stations		
				Lines	Instruments	Radiocommunication	Broadcasting	Television
	'000	'000	no.	'000	'000	no.	no.	no.
1929-30	19	455	360	12	15	20	3	..
1934-35	18	387	342	12	15	40	4	..
1939-40	16	471	357	15	19	25	11	..
1944-45	30	826	354	17	22	22	11	..
1949-50	36	952	370	23	31	198	11	..
1954-55	41	648	390	34	46	434	12	..
1959-60	43	537	391	47	63	882	12	2
1960-61	42	528	383	49	67	1 107	12	2
1961-62	43	513	377	51	70	1 440	12	3
1962-63	42	515	371	54	75	1 768	12	3
1963-64	42	548	368	57	78	2 227	12	4
1964-65	52	550	365	59	82	2 574	12	4
1965-66	60	582	349	62	86	2 951	12	4
1966-67	53	621	331	65	89	3 561	12	4
1967-68	(a) 21	575	312	67	93	3 856	12	4
1968-69	24	562	288	70	98	4 377	12	4
1969-70	24	542	273	75	105	4 994	12	4
1970-71	36	499	257	78	114	5 499	12	4
1971-72	36	458	238	80	113	5 892	12	5
1972-73		473	230	85	118	6 390	12	5
1973-74		472	224	90	127	6 570	12	5
1974-75		424	212	96	133	7 347	12	5
1975-76		356	206	100	140	7 915	12	5
1976-77		298	198	105	146	8 687	15	5
1977-78		242	197	112	155 (b)	14 747	15	5
1978-79		178	196	118	164	13 936	15	5
1979-80		135	196	125	174	14 018	16	5

(a) From 1967-68 excludes telegrams received, details of which are no longer available.

(b) Includes licensed Citizens Band Radio Service operators from 1977-78.

## Fire, Marine and General Insurance: Expenditure, Tasmania (\$'000)

(Chapter 12)

Year	Net claims	Other expenditure				Total
		Contributions to fire brigades	Commission and agents' charges	Expenses of management	Taxation	
1939-40	357				33	755
1944-45	357	12	147	241	115	871
1949-50	942	21	324	437	127	1 852
1954-55	2 743	64	787	1 093	288	4 976
1959-60	5 404	144	1 192	1 828	470	9 038
1964-65	7 854	230	1 601	2 662	692	13 038
1965-66	9 153	250	1 617	2 840	623	14 484
1966-67	16 158	242	1 760	3 248	664	22 071
1967-68	16 890	298	1 863	3 497	749	23 297
1968-69	10 865	508	2 063	3 929	588	17 953
1969-70	12 285	521	2 118	4 407	424	19 757
1970-71	13 214	583	2 388	4 942	626	21 753
1971-72	15 279	815	2 696	5 856	738	25 384
1972-73	18 249	979	2 999	6 364	780	29 371
1973-74	23 507	1 069	3 330	6 875	1 041	35 822
1974-75	29 979	1 371	4 002	8 102	376	44 217
1975-76	29 952	1 529	4 509	8 100	336	41 238
1976-77	42 010	2 483	4 472	11 844	627	61 420
1977-78	50 279	127	5 774	12 898	312	69 665

## Appendix A

(Chapter 12)

Banking, Tasmania  
(\$'000)

Year	Trading banks (including Commonwealth Trading Bank) (a)			Savings banks (b)	Year	Trading banks (including Commonwealth Trading Bank) (a)			Savings banks (b)
	Deposits	Advances	Debits to customers accounts (c)			Deposits	Advances	Debits to customers accounts (c)	
1935-36				13 636	1957-58	73 736	41 360	25 800	80 482
1936-37				14 430	1958-59	75 218	44 828	27 600	84 924
1937-38				15 384	1959-60	79 574	45 948	31 000	92 712
1938-39				16 792					
1939-40					1960-61	76 454	48 010	32 600	94 776
	n.a.	n.a.	n.a.	17 036	1961-62	78 952	49 340	32 080	102 460
1940-41				17 882	1962-63	83 178	53 176	35 068	112 856
1941-42				18 944	1963-64	86 210	55 122	37 062	124 770
1942-43				22 348	1964-65	94 604	54 176	41 340	135 736
1943-44				28 426	1965-66	102 507	55 214	43 105	148 401
1944-45				33 828	1966-67	112 091	60 460	47 103	167 106
1945-46	34 560	7 346	5 778	40 894	1967-68	117 811	69 297	51 222	177 827
1946-47	35 504	10 168	6 748	41 712	1968-69	124 473	72 394	55 896	190 043
1947-48	37 360	14 954	7 894	43 144	1969-70	131 501	77 603	61 173	199 790
1948-49	39 620	20 084	9 398	44 826					
1949-50	44 114	22 834	11 210	48 544	1970-71	133 587	86 976	64 177	217 663
				54 310	1971-72	135 099	88 098	69 970	242 856
1950-51	53 444	26 636	14 740	60 238	1972-73	159 141	99 192	85 291	288 986
1951-52	61 474	33 378	17 712	64 156	1973-74	207 040	121 077	103 041	328 029
1952-53	58 270	33 440	17 700	67 894	1974-75	229 851	137 189	119 447	382 326
1953-54	62 286	37 800	19 876	71 618	1975-76	277 377	157 951	150 536	430 618
1954-55	65 826	43 670	21 432	74 422	1976-77	348 613	207 635	179 932	477 134
1955-56	68 562	44 582	23 242	77 518	1977-78	375 773	250 144	193 310	530 457
1956-57	72 976	40 406	25 200		1978-79	415 180	300 811	220 074	587 755

(a) Average of weekly figures.

(b) Commonwealth, trustee and private. Private savings commenced operations in Tasmania as follows: A.N.Z., September 1961; National, May 1962; C.B.A., July 1962; C.B.C., March 1963; and Bank of Adelaide, November 1970.

(c) Excludes debits to Government accounts at Hobart City branches.

(Chapter 12)

Instalment Credit for Retail Sales, Tasmania (a)  
(\$'000)

Year	Amount financed during period (b)						Balances outstanding at end of period	
	Motor vehicles (c)		Household and personal goods		Total all goods		Type of business	
	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses	Non-retail businesses	Retail businesses
1965-66	18 017	400		11 126	29 543		37 495	7 645
1966-67	19 025	422		11 160	30 607		38 777	7 050
1967-68	21 909	430		12 058	34 397		43 141	6 457
1968-69	21 001	821		13 751	35 573		44 205	6 826
1969-70	23 353	925		13 816	38 094		46 537	7 317
1970-71	25 485	1 215		13 705	40 405		50 453	7 293
1971-72	28 240	1 117		13 511	42 868		54 463	7 097
1972-73	32 695	616		14 579	47 890		60 860	6 497
	Finance businesses	Other businesses	Finance businesses	Other businesses	Finance businesses	Other businesses	Finance businesses	Other businesses
1973-74	32 278	457	3 394	5 489	35 672	5 946	51 512	5 621
1974-75	40 409	371	4 028	5 753	44 437	6 124	63 544	4 352
1975-76	45 612	282	6 819	5 752	52 431	6 034	78 038	4 371
1976-77	54 738	175	7 465	5 951	62 203	6 125	95 463	4 137
1977-78	54 967	-	6 163	5 063	61 130	5 063	104 029	3 117
1978-79	48 714	-	6 761	2 753	55 475	2 753	95 716	1 486
1979-80	39 814	-	7 116	1 048	46 930	1 048	86 164	1 495

(a) A break in continuity of the series occurs from 1973-74. The classification for the pre-1973-74 categories 'retail businesses' and 'non-retail businesses' differs from the subsequent categories 'finance businesses' and 'other businesses' mainly in the treatment of incorporated finance subsidiaries of retailers. These were formerly included in the category 'retail businesses' but are subsequently covered in 'finance businesses'.

(b) Includes time payment, budget account, and personal loan schemes associated primarily with financing of retail sales of goods. However, it excludes the hiring charges, interest and insurance costs associated with these types of contracts.

(c) Includes new and used cars, boats, caravans, trailers and motor parts and accessories but excludes commercial type vehicles.

(Chapter 13)

## Summary of Dwellings at Census Dates, Tasmania

Particulars	Date of Census							
	April 1921	June 1933	June 1947	June 1954	June 1961	June 1966	June 1971	June 1976
Dwellings (including hotels, boarding houses, flats, etc.)—								
Occupied .....	45 818	52 484	62 484	78 789	91 258	99 366	110 483	122 573
Unoccupied .....	2 934	2 421	2 351	5 288	8 582	10 800	13 302	15 786
Total .....	48 752	54 905	64 835	84 077	99 840	110 166	123 785	138 359
Average inmates per occupied dwelling .....	4.65	4.32	4.10	3.91	3.83	3.74	3.15	2.91
Occupied private dwellings according to—								
Class of dwelling—								
Private house (including share) (a) .....	42 028	48 479	58 937	74 244	83 736	90 131	99 401	100 534
Flat (including apartment) .....	2 404	2 831	2 064	2 534	5 574	7 058	8 417	21 298
Other .....			461	869	888	1 093	1 785	
Total .....	44 432	51 310	61 462	77 647	90 198	98 282	109 603	121 832
Material of outer walls—								
Brick .....	8 050	9 860	12 491	15 083	18 749	23 664	34 668	44 884
Stone .....	1 786	1 651	1 768	1 555	1 335	1 194	1 355	1 524
Concrete .....	274	411	1 064	2 703	3 487	3 522	3 064	6 404
Wood .....	32 689	37 743	43 396	54 370	62 456	63 573	65 247	61 346
Asbestos-cement .....	27	138	1 134	2 655	2 922	3 346	3 682	4 114
All other (including not stated) .....	1 606	1 507	1 609	1 281	1 249	2 983	1 587	3 560
Nature of occupancy—								
Owner .....	16 851	20 404	28 377	38 436	42 896	67 685	73 267	38 852
Purchaser by instalments .....	4 364	3 986	4 140	9 810	19 006	25 597	30 583	44 432
Tenant .....	19 037	22 734	26 077	26 991	25 938	25 597	30 583	29 638
Other methods of occupancy (including not stated) .....	4 180	4 186	2 868	2 410	2 358	5 000	5 753	8 910

(a) Separate house for 1976.

## Value of Building Approvals and Construction: All New Building, Tasmania (\$'000)

(Chapter 13)

Year	Building approvals	Building construction								
		Commenced			Completed			Under construction at 30 June		
		Dwellings	Other building	Total	Dwellings	Other building	Total	Dwellings	Other building	Total
1946-47 .....	6 726	3 728	1 708	5 436	2 308	526	2 834	3 614	1 904	5 518
1947-48 .....	8 358	5 256	1 958	7 214	3 492	1 066	4 558	5 532	2 760	8 292
1948-49 .....	11 742	7 960	2 782	10 742	6 042	1 578	7 620	7 670	4 074	11 744
1949-50 .....	16 740	11 702	5 056	16 758	8 426	2 258	10 684	11 368	6 612	17 980
1950-51 .....	21 694	15 000	5 672	20 672	13 508	3 298	16 806	14 250	10 106	24 356
1951-52 .....	20 042	15 360	6 766	22 126	16 414	4 608	21 022	14 504	13 036	27 540
1952-53 .....	15 984	10 664	2 558	13 222	15 252	6 078	21 330	10 608	10 380	20 988
1953-54 .....	21 646	13 552	4 896	18 448	13 520	5 864	19 384	11 532	12 032	23 564
1954-55 .....	25 612	15 244	6 428	21 672	13 092	8 206	21 298	13 992	10 806	24 798
1955-56 .....	25 074	13 842	5 936	19 778	15 138	10 458	25 596	13 230	6 498	19 728
1956-57 .....	30 964	15 138	13 138	28 276	16 434	8 784	25 218	12 420	11 750	24 170
1957-58 .....	27 232	14 980	10 486	25 466	15 844	9 836	25 680	11 866	12 026	23 892
1958-59 .....	27 592	16 662	12 156	28 818	15 986	10 914	26 900	12 742	13 364	26 106
1959-60 .....	39 159	15 834	20 652	36 486	16 570	15 036	31 606	12 026	19 156	31 182
1960-61 .....	30 539	15 936	12 344	28 280	17 206	16 822	34 028	10 912	15 016	25 928
1961-62 .....	37 804	17 026	18 360	35 386	16 630	16 824	33 454	11 136	16 640	27 776
1962-63 .....	37 416	16 668	17 944	34 612	16 892	17 240	34 128	10 912	17 500	28 412
1963-64 .....	34 521	18 944	15 720	34 664	18 070	15 906	33 976	11 764	17 330	29 094
1964-65 .....	44 872	20 922	21 118	42 040	20 060	17 684	37 744	12 628	20 738	33 366
1965-66 .....	48 870	19 200	24 589	43 789	19 010	20 670	39 680	12 671	24 651	37 412
1966-67 .....	53 593	25 869	36 208	62 070	23 230	24 986	48 218	15 394	35 875	51 269
1967-68 .....	72 021	29 791	33 359	63 153	30 078	31 805	61 881	15 095	37 411	52 504
1968-69 .....	52 291	28 011	28 191	56 202	28 142	28 807	56 947	14 634	37 262	51 896
1969-70 .....	59 534	32 326	29 805	62 131	32 170	34 282	66 452	14 675	36 347	51 022
1970-71 .....	67 991	32 233	37 956	70 189	29 275	30 409	59 684	17 906	45 559	63 465
1971-72 .....	70 083	32 219	32 100	64 319	31 699	38 018	69 717	19 262	42 374	61 636
1972-73 .....	90 421	43 328	47 279	90 607	36 190	41 915	78 105	27 418	49 104	76 522
1973-74 (a) .....	100 719	57 579	49 546	107 125	48 259	40 687	88 946	38 476	58 947	97 363
1974-75 .....	112 736	59 641	53 539	113 180	58 182	41 311	99 493	42 436	73 883	116 319
1975-76 .....	160 390	94 481	62 360	156 840	77 130	67 979	145 109	65 067	75 427	140 494
1976-77 .....	200 562	100 636	77 938	178 574	102 888	71 674	174 563	67 915	85 758	153 674
1977-78 .....	187 729	95 941	96 314	192 255	105 701	87 319	193 019	61 583	99 732	161 316
1978-79 .....	183 416	105 265	106 141	211 406	99 460	74 968	174 427	73 161	133 694	206 854
1979-80 .....	195 912	95 771	82 821	178 591	106 452	111 180	217 633	62 278	117 250	179 529

(a) Alterations and additions to dwellings valued at \$10 000 and over are included with the value of dwellings up to 1972-73 but excluded thereafter; from 1973-74 the value of alterations and additions to dwellings valued at \$10 000 and over is included with 'other building'.

## Appendix A

(Chapter 13) New Houses Completed and Value of Work Done on New Houses and Other New Building, Tasmania

Year	New houses completed according to material of outer walls (a)								Value of work done on—		
	Brick, concrete, etc. solid and veneer		Wood (weatherboard, etc.)		Asbestos-cement and other materials		Total new houses		New houses	Other new building	All building
	Number	Value (\$'000)	Number	Value (\$'000)	Number	Value (\$'000)	Number	Value (\$'000)			
1946-47	296	824	756	1 420	18	30	1 070	2 274	n.a.	n.a.	n.a.
1947-48	373	1 180	1 127	2 228	44	74	1 544	3 482	n.a.	n.a.	n.a.
1948-49	534	1 954	1 606	3 800	147	230	2 287	5 984	n.a.	n.a.	n.a.
1949-50	722	2 906	1 955	5 140	175	324	2 852	8 370	n.a.	n.a.	n.a.
1950-51	959	4 488	2 741	8 520	214	444	3 914	13 452	n.a.	n.a.	n.a.
1951-52	982	5 380	2 697	10 042	320	912	3 999	16 334	16 360	7 390	23 750
1952-53	876	5 350	2 189	9 012	249	818	3 314	15 180	14 096	6 428	20 524
1953-54	632	4 342	1 879	8 730	119	382	2 630	13 454	13 636	6 754	20 390
1954-55	515	3 452	1 898	9 152	67	220	2 480	12 824	14 040	7 564	21 604
1955-56	685	4 756	1 934	9 724	102	302	2 721	14 782	14 710	7 658	22 368
1956-57	703	5 066	1 975	10 384	81	264	2 759	15 714	14 570	10 696	25 266
1957-58	583	4 534	1 891	10 800	92	256	2 566	15 590	15 436	11 122	26 558
1958-59	674	5 132	1 807	9 856	96	310	2 577	15 298	15 512	12 572	28 084
1959-60	814	6 406	1 582	8 814	79	240	2 475	15 460	14 936	16 430	31 366
1960-61	845	6 772	1 562	9 232	80	250	2 487	16 254	15 658	18 170	33 828
1961-62	910	7 404	1 413	8 096	74	218	2 397	15 718	16 054	18 722	34 776
1962-63	1 006	8 016	1 426	8 252	72	216	2 504	16 484	16 310	17 826	34 136
1963-64	1 098	9 116	1 337	7 956	76	260	2 511	17 332	17 884	17 966	35 850
1964-65	1 352	11 746	1 142	7 158	85	312	2 579	19 216	19 510	18 846	38 356
1965-66	1 254	11 491	932	6 033	74	282	2 260	17 806	17 703	25 498	43 201
1966-67	1 326	12 635	1 073	6 987	366	2 443	2 765	22 065	22 734	30 364	53 098
1967-68	1 724	17 324	1 395	9 646	212	1 334	3 331	28 304	28 573	31 486	60 059
1968-69	1 724	18 345	755	5 365	225	1 813	2 704	25 523	25 587	33 198	58 785
1969-70	1 892	20 756	577	4 071	392	3 457	2 861	28 283	28 142	40 286	68 428
1970-71	1 711	19 848	350	2 978	202	1 633	2 263	24 459	26 831	38 616	65 446
1971-72	1 781	22 007	196	1 615	284	2 545	2 261	26 165	25 329	44 854	70 183
1972-73	2 018	26 800	204	1 705	162	1 143	2 384	29 648	32 568	45 575	78 143
1973-74 (a)	2 505	39 290	137	1 510	157	1 157	2 819	41 957	46 332	49 552	95 884
1974-75	2 327	45 440	116	1 471	207	1 863	2 650	48 775	48 757	68 222	116 979
1975-76	2 440	58 143	112	1 807	252	3 321	2 804	63 272	73 190	87 361	160 551
1976-77	2 635	74 912	148	2 894	354	7 071	3 137	84 877	85 669	92 007	177 676
1977-78	2 420	75 245	214	4 159	199	3 150	2 833	82 565	81 487	117 094	198 581
1978-79	2 204	72 679	219	4 706	192	3 333	2 617	80 718	87 079	113 737	200 816

(a) Alterations and additions to houses valued at \$10 000 and over are included with the number and value of dwellings up to 1972-73 but excluded thereafter; from 1973-74, alterations and additions to houses valued at \$10 000 and over are included in 'other building'.

(Chapter 14)

## Education: Post Secondary and Tertiary, Tasmania

Year	Technical and Community colleges			College of Advanced Education		University	
	Number of colleges	Teaching staff	Students, aggregate enrolment	Teaching staff full-time	Students	Teaching staff full-time	Total students enrolled
1900.....	1	n.a.	(a) 41	..	..	9	51
1905.....	4	28	(b) 756	..	..	9	67
1910.....	4	34	(b) 614	..	..	10	147
1915.....	5	40	(b) 955	..	..	17	258
1920.....	4	63	1 152	..	..	23	179
1925.....	4	64	1 049	..	..	28	173
1930.....	4	67	950	..	..	29	449
1935.....	4	83	1 037	..	..	36	229
1940.....	6	169	2 015	..	..	47	(c) 452
1945.....	6	206	2 951	..	..	43	503
1950.....	9	287	5 099	..	..	80	670
1955.....	(d) 13	(d) 396	(d) 6 151	..	..	(e) 78	783
1960.....	11	524	7 565	..	..	108	1 332
1961.....	12	480	6 499	..	..	110	1 460
1962.....	11	509	6 946	..	..	120	1 572
1963.....	(f) 10	(f) 539	(f) 7 587	n.a.	n.a.	127	1 691
1964.....	9	590	7 692	n.a.	n.a.	131	1 863
1965.....	12	588	7 916	n.a.	n.a.	145	2 083
1966.....	11	745	7 962	n.a.	n.a.	163	2 346
1967.....	10	787	8 200	n.a.	n.a.	164	2 443
1968.....	(g) 7	(g) 845	(g) 8 159	52	1 052	169	2 592
1969.....	7	774	8 125	52	1 121	193	2 830
1970.....	7	739	8 069	53	1 134	202	3 119
1971.....	7	754	6 849	62	1 142	220	3 444
1972.....	7	566	7 234	115	1 811	248	3 371
1973.....	6	707	7 519	165	2 003	254	3 263
1974.....	7	911	9 826	184	2 261	r 271	3 414
1975.....	9	866	10 254	203	2 435	280	3 399
1976.....	10	1 070	11 155	206	2 642	r 290	3 536
1977.....	10	967	13 018	201	2 586	298	3 525
1978.....	11	1 191	14 431	210	2 796	r 308	3 517
1979.....	8	1 127	15 799	204	2 827	301	3 435

(a) Average quarterly enrolments.

(b) Individual students.

(c) Gross enrolments from 1936 to 1949; individual enrolments thereafter.

(d) Includes schools at which Senior Technical Classes were held.

(e) Excludes part-time teaching staff from 1952.

(f) Includes School of Art from 1963 and Conservatorium of Music from 1964.

(g) Excludes School of Art, Conservatorium of Music and details of advanced education courses conducted at other institutions.

(Chapter 14)

## Education: Primary and Secondary, Tasmania

Year	Government schools			Non-government schools		
	Number of schools	Teaching staff	Students (a)	Number of schools	Teaching staff	Students (b)
1900.....	309	(c) 612	24 157	224	n.a.	9 749
1905.....	343	600	24 043	167	n.a.	8 323
1910.....	367	677	30 805	124	420	6 278
1915.....	457	968	35 812	92	322	5 944
1920.....	470	1 102	39 360	84	317	5 872
1925.....	515	1 315	39 910	75	312	6 103
1930.....	508	1 358	40 032	66	326	5 862
1935.....	516	1 282	39 332	65	324	5 794
1940.....	431	1 398	37 369	63	329	6 139
1945.....	356	1 511	35 925	59	321	6 987
1950.....	332	1 687	46 394	58	375	8 330
1955.....	291	2 277	60 779	57	424	10 454
1960.....	287	2 540	65 049	60	544	12 716
1961.....	289	2 479	66 624	66	570	13 435
1962.....	286	(d) 2 771	68 346	66	597	13 673
1963.....	288	2 955	69 633	66	595	14 194
1964.....	293	3 075	70 643	64	635	14 385
1965.....	296	3 243	71 615	64	666	14 688
1966.....	294	3 374	72 461	64	686	14 743
1967.....	297	3 531	74 265	65	695	14 913
1968.....	291	3 571	76 109	68	753	14 974
1969.....	295	3 666	78 339	67	760	14 740
1970.....	283	3 756	79 385	68	810	14 623
1971.....	283	3 796	80 092	68	775	14 415
1972.....	280	3 845	79 957	66	791	14 098
1973 (e).....	280	3 937	79 705	65	684	14 237
1974 (e).....	279	4 099	79 835	65	710	14 407
1975 (e).....	285	4 310	80 917	66	736	14 597
1976 (e).....	284	4 430	81 182	71	739	14 431
1977 (e).....	284	4 511	80 872	70	756	14 446
1978 (e).....	291	4 584	80 582	67	757	14 688
1979 (e).....	289	4 752	79 537	65	792	14 738

(a) Aggregate enrolment for whole year prior to 1960. From 1960 as at 1 August and excluding adult correspondence students.

(b) Aggregate enrolment for whole year to 1919. From 1920 to 1961 enrolment as at 31 December and thereafter at 1 August.

(c) Includes teachers, pupil-teachers and paid monitors; excludes training college staff, junior monitors, subsidised teachers, etc.

(d) Includes part-time teachers but excludes teachers at special schools from 1962.

(e) Full-time plus full-time equivalent of part-time teachers.

(Chapter 15)

## Commonwealth Social Service Benefits Paid in Tasmania

Year	Family allowances, total amount paid (a)	Maternity allowance		Unemployment benefit		Sickness benefit		Special benefit (b)	
		Claims admitted	Amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid	Claims admitted	Amount paid
	\$'000	no.	\$'000	no.	\$'000	no.	\$'000	no.	\$'000
1912-13.....	-	3 611	n.a.	-	-	-	-	-	-
1944-45.....	1 057	5 582	n.a.	-	-	-	-	-	-
1949-50.....	2 483	7 408	n.a.	151	4	2 840	74	126	8
1954-55.....	(c) 4 065	7 940	255	471	(d) 32	1 943	(d) 103	106	24
1959-60.....	4 719	8 985	285	3 186	242	1 883	135	130	39
1960-61.....	5 484	9 007	296	3 995	229	1 893	134	102	39
1961-62.....	4 993	8 942	289	8 273	696	2 000	163	93	38
1962-63.....	5 045	8 560	277	7 141	783	2 099	203	111	44
1963-64.....	6 113	8 437	272	6 720	750	2 167	215	135	52
1964-65.....	6 306	7 821	251	5 255	583	2 238	201	122	52
1965-66.....	6 318	7 578	243	2 742	275	2 040	174	122	57
1966-67.....	6 912	7 606	243	3 166	228	2 147	190	160	47
1967-68.....	6 612	7 939	254	3 746	264	1 952	165	99	42
1968-69.....	6 710	8 373	267	3 984	297	2 070	166	403	55
1969-70.....	7 416	8 130	259	3 825	360	2 194	199	429	68
1970-71.....	6 686	8 594	274	4 388	366	2 687	327	388	71
1971-72.....	7 196	8 211	260	8 974	966	2 964	497	418	79
1972-73.....	8 185	7 615	241	12 536	2 095	3 295	792	459	128
1973-74.....	7 212	7 296	230	11 642	3 125	3 975	1 247	574	224
1974-75.....	6 610	7 225	229	22 088	7 746	4 144	1 692	800	443
1975-76.....	7 766	7 210	215	30 930	15 256	5 018	2 409	1 760	811
1976-77.....	31 197	6 729	215	23 981	17 963	4 662	2 380	1 827	979
1977-78.....	30 968	6 836	213	27 337	23 398	4 284	2 385	1 792	804
1978-79.....	n.y.a.	n.y.a.	n.y.a.	26 294	28 609	3 881	2 024	2 071	1 299

(a) Known as "child endowment" up to 1975-76; replaced by increased "family allowances" from 1 July 1976 in conjunction with abolition of tax rebates in respect of dependent children.

(b) Includes payments to migrants.

(c) Endowment extended to first child from 20 June 1950.

(d) Rates payable were doubled from 22 September 1952.



(Chapter 15)

## Commonwealth Pensions: Tasmania

Chapter 15)

Year	Age and invalid pensions						War pensions (a)		Widows' pensions	
	Number of pensioners		Expenditure on pensions		Weekly rate (b)	Operative from	Number in force	Amount paid	Number in force	Amount paid
	Age	Invalid	Age	Invalid						
	no.	no.	\$'000	\$'000	\$	date	no.	\$'000	no.	\$'000
1909-10	3 245	—	159	—	1-00	1.7.1909	—	—	—	—
1914-15	4 528	1 349	223	68	1-00	—	—	—	—	—
1919-20	4 806	1 947	364	145	1-50	1.1.1920	9 551	524	—	—
1924-25	5 856	2 036	503	180	1-75	13.9.1923	10 770	590	—	—
1929-30	7 678	2 456	753	248	2-00	8.10.1925	12 321	695	—	—
1934-35	8 495	2 975	737	263	1-75	23.7.1931	12 523	724	—	—
1939-40	10 614	2 552	1 055	256	2-10	26.12.1940	11 729	808	—	—
1944-45	9 512	2 699	1 271	368	2-70	19.8.1943	12 081	1 103	1 564	207
1949-50	11 402	3 158	2 359	670	4-25	21.10.1948	19 168	2 036	1 384	314
1950-51	11 548	2 885	2 819	724	5-00	2.11.1950	21 407	2 595	1 366	323
1951-52	11 716	2 762	3 457	831	6-00	1.11.1951	22 863	3 121	1 358	376
1952-53	12 380	2 602	4 107	879	6-75	2.10.1952	23 966	3 429	1 380	441
1953-54	12 906	2 605	4 358	908	7-00	29.10.1953	24 935	3 641	1 371	461
1954-55	13 679	2 681	4 795	967	7-00	—	25 731	3 934	1 409	475
1955-56	14 074	2 596	5 605	1 063	8-00	27.10.1955	26 483	4 035	1 419	537
1956-57	14 847	2 812	5 887	1 183	8-00	—	26 751	4 054	1 476	607
1957-58	15 114	2 883	6 527	1 315	8-75	24.10.1957	27 238	4 424	1 581	677
1958-59	15 434	3 070	6 660	1 419	8-75	—	27 621	4 458	1 663	741
1959-60	15 835	3 206	7 471	1 605	9-50	8.10.1959	28 048	4 832	1 773	833
1960-61	16 552	3 338	(c) 10 101	—	10-00	6.10.1960	28 305	5 166	1 849	940
1961-62	17 522	3 299	11 404	—	10-50	5.10.1961	28 398	4 988	1 912	1 037
1962-63	17 760	3 343	11 717	—	10-50	—	28 214	5 668	1 977	1 084
1963-64	18 303	3 363	12 343	—	11-50	14.11.1963	27 913	6 158	2 109	1 467
1964-65	18 892	3 532	13 184	—	12-00	1.10.1964	27 109	6 214	2 248	1 699
1965-66	19 181	3 444	13 439	—	12-00	—	26 446	6 919	2 327	1 791
1966-67	19 590	3 530	14 574	—	13-00	13.10.1966	25 629	6 645	2 432	1 988
1967-68	20 411	3 548	15 414	—	13-00	—	25 015	6 790	2 588	2 125
1968-69	21 029	3 819	16 768	—	14-00	10.10.1968	24 485	7 622	2 678	2 465
1969-70	23 915	4 051	19 517	—	15-00	9.10.1969	23 807	7 835	2 958	2 927
1970-71	24 894	4 316	21 835	—	15-50	8.10.1970	23 254	8 230	3 138	3 327
1971-72	25 668	4 498	25 543	—	16-00	8.4.1971	—	—	—	—
1972-73	29 107	4 855	33 656	—	17-25	7.10.1971	22 512	9 094	3 205	3 842
1973-74	31 904	5 087	43 032	—	18-25	4.5.1972	—	—	—	—
1974-75	34 269	5 460	60 118	—	20-00	Aug. 1972	21 905	9 857	3 600	5 136
1975-76	35 594	6 091	77 976	—	21-50	Mar. 1973	21 987	11 176	3 932	6 582
1976-77	36 954	6 612	91 788	—	23-00	Aug. 1973	21 474	13 697	4 103	8 521
1977-78	r 38 204	r 6 205	107 203	—	26-00	Apr. 1974	20 778	14 827	4 209	11 221
1978-79	38 885	6 427	117 678	—	31-00	Aug. 1974	20 062	16 637	r 4 572	12 455
					36-00	Apr. 1975	18 844	18 676	r 5 001	14 660
					38-75	Aug. 1975	—	—	—	—
					41-25	Apr. 1976	—	—	—	—
					43-50	Aug. 1976	—	—	—	—
					47-10	Apr. 1977	—	—	—	—
					49-30	Nov. 1977	—	—	—	—
					51-45	May. 1978	—	—	—	—
					53-20	Nov. 1978	—	—	—	—

(a) Excludes pensions in respect of the Boer War which are paid by the United Kingdom.

(b) Maximum single rate payable, subject to Means Test.

(c) Separate figures for age and invalid pensions not available from 1960-61.

(Chapter 17)

## Employment; Unemployment; Wage Rates and Earnings, Tasmania

Year	Civilian employees at 30 June	Unemployment			Prescribed weekly wage rates, adult males, Hobart at 31 December		Average wage rates and earnings, Tasmania		
		Labour force surveys (a)	Persons registered with C'wealth employment service (b)	Persons receiving unemployment benefits (c)	Basic wage (d)	Minimum wage (e)	Weighted average minimum weekly wage rates, adult males at 31 December (f)	Average weekly earnings per employed male unit for June qtr.	
								Amount	Increase (g)
	('000)	('000)	no.	no.	\$	\$	\$	\$	per cent
1939					7.70		9.22		
1940					8.10		9.61		
1941									
1942					8.50		10.35		
1943					9.20		11.17		
1944					9.50		11.58	n.a.	n.a.
1945					9.40		11.53		
1946					9.40		11.56		
1947			n.a.	83	10.30		12.45		
1948			243	44	10.70		13.54		
1949			204	28	11.80		15.19		
1950			276	32	12.80		16.43	16.66	n.a.
			208	32	16.00		19.80	19.32	16.0
1951									
1952			169	10	19.90		23.82	23.74	22.9
1953	n.a.	n.a.	643	104	23.00		27.22	29.08	22.5
1954			812	323	24.20		28.33	30.86	6.1
1955			555	109	24.20		28.77	32.78	6.2
1956			560	45	24.20		29.36	35.86	9.4
1957			553	71	25.20		31.39	37.80	5.4
1958			1 585	410	26.20		31.85	39.20	3.7
1959			2 231	639	26.70		32.36	40.20	2.6
1960			2 109	670	28.20		34.71	40.30	0.3
			2 204	500	28.20		35.15	44.50	10.4
1961									
1962			3 213	1 336	29.40		36.27	44.70	0.4
1963			3 609	1 778	29.40		36.48	47.80	6.9
1964			3 427	1 777	29.40		37.29	48.30	1.0
1965			2 968	1 399	31.40		39.69	49.90	3.3
			2 235	926	31.40		40.73	52.70	5.6
1966	115.4		1 695	433	33.40		43.27	55.20	4.7
1967	118.7		2 116	526	34.40	38.15	45.31	60.10	8.9
1968	121.8		2 088	635	35.75	40.45	48.98	63.20	5.2
1969	124.6	n.a.	2 120	600	36.80	43.00	52.00	67.70	7.1
1970	127.8		1 888	437	36.80	43.00	54.49	74.30	9.7
1971	125.5		2 682	782	39.00	47.00	60.86	84.80	14.1
1972	126.8	3.5	3 498	1 697	41.00	51.70	67.18	92.00	8.5
1973	129.2	4.2	3 718	2 330	43.50	60.70	76.80	102.00	10.9
1974	133.7	4.4	3 310	1 769	46.00	68.70	106.02	121.10	18.7
1975	137.3	6.7	6 190	4 439	50.00	83.50	117.27	151.40	25.0
1976	135.0	8.5	8 986	7 228	62.90	102.30	134.14	165.10	9.0
1977	137.1	10.2	8 786	7 078	72.40	114.00	147.58	185.50	12.4
1978	137.3	10.8	11 944	9 757	77.50	121.90	159.23	201.10	8.4
1979	r 137.9	11.2	12 791	10 420	(i) 80.00	(i) 125.80	166.84	217.80	8.3
1980	n.y.a.	11.7	13 344	11 121	83.60	131.50	n.y.a.	247.30	13.5

(a) At May each year except for June in 1978.

(b) Persons on register on Friday nearest the end of June who claimed, when registering with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. Includes those referred to employers and those who may have obtained employment without notifying the Commonwealth Employment Service and also those receiving unemployment benefit. The Commonwealth Employment Service commenced operating in May 1946. (Source: Department of Employment and Youth Affairs.)

(c) Persons on benefit on last Saturday of June. Unemployment Benefit was first paid in July, 1945. (Source: Department of Employment and Youth Affairs.)

(d) The rates shown up to and including 1966 are those in Commonwealth awards. State Wages Boards awards are shown from 1967. The Commonwealth and State rates prior to 1967 were identical except between 1956 and 1959 when the States rates were slightly higher.

(e) The Tasmanian Wages Boards introduced the concept of the minimum wage in June 1967.

(f) Wage rates used to compile the index are the minimum rates prescribed for particular occupations in Commonwealth or State awards and in registered (and in some cases unregistered) agreements.

(g) Over June quarter of previous year.

(h) Earnings shown from 1967 are not strictly comparable with those for earlier years.

(i) Tasmanian decision of 13 July 1979 following National Wage Case decision of 27 June 1979.

(Chapter 17)

## Consumer Price Index Numbers, Hobart (a)

Year	Food	Clothing	Housing	Household equipment and operation	Transportation	Tobacco and alcohol	Health and personal care	Recreation	All groups	
									Index no.	Increase, per cent (b)
1949-50	41.3	56.4	38.2						45.8	7.3
1954-55	74.9	84.8	57.9						74.3	4.9
1955-56	79.5	85.8	63.7						78.1	5.1
1956-57	82.9	88.2	69.7						82.8	6.0
1957-58	80.5	90.4	71.8						82.9	0.1
1958-59	81.7	91.3	73.8						84.1	1.4
1959-60	82.8	92.0	77.6	n.a.	n.a.	n.a.	n.a.	n.a.	85.6	1.8
1960-61	92.4	93.5	81.9						90.3	5.5
1961-62	90.2	94.7	85.6						90.7	0.4
1962-63	88.9	95.2	88.2						90.7	
1963-64	90.1	95.7	90.9						91.7	1.1
1964-65	94.0	97.0	94.5						94.6	3.2
1965-66	98.9	98.0	97.1						98.0	3.6
1966-67	100.0	100.0	100.0	100.0	100.0	100.0			100.0	2.0
1967-68	106.8	102.4	103.6	103.7	104.2	102.1	n.a.		104.6	4.6
1968-69	105.3	104.5	108.4	105.8	108.1	105.0			106.1	1.4
1969-70	106.4	107.9	112.6	107.4	111.2	107.3	102.5	n.a.	108.5	2.3
1970-71	109.6	111.9	117.4	110.9	116.2	115.6	103.2		112.6	3.8
1971-72	112.9	118.5	124.2	119.3	126.6	124.7	119.8		119.9	6.5
1972-73	120.0	125.6	131.8	123.8	132.1	134.7	125.8		126.7	5.7
1973-74	141.4	142.4	146.9	132.8	139.6	152.7	141.0		142.6	12.5
1974-75	158.6	171.8	180.9	156.4	165.3	169.4	174.1		166.7	16.9
1975-76	177.5	200.9	216.4	183.9	196.7	206.3	138.5	100.0	190.0	14.0
1976-77	201.5	232.5	244.9	201.8	220.7	222.0	250.3	103.6	217.7	14.6
1977-78	224.3	257.1	264.6	220.0	241.6	232.2	302.6	110.2	239.1	9.8
1978-79	251.3	277.2	278.1	235.9	256.5	268.4	292.2	118.7	257.7	7.8
1979-80	286.8	297.6	293.7	257.2	291.5	289.1	319.8	128.5	284.0	10.2

(a) Base of each index: year 1966-67 = 100.0 except 'Health and personal care' (December quarter 1968 = 100.0) and 'Recreation' (September quarter 1976 = 100.0)

(b) Over previous year.

## Average Retail Prices (a) of Selected Items of Foodstuffs: Hobart (Cents)

(Chapter 17)

Year	Bread delivered 900 g	Tea 250 g	Sugar 2 kg	Potatoes 1 kg	Butter (factory) 500 g	Eggs 1 doz 55 g	Bacon rashers 250 g	Beef rib without bone 1 kg	Corned beef (brisket) (b) 1 kg	Mutton (leg) (b) 1 kg	Mutton chops (loin) (b) 1 kg	Pork (leg) 1 kg
1901	2.3	6.8	9.3	1.4	12.5	10.6	9.3	11.2	9.3	9.0	10.4	11.7
1906	2.4	6.8	9.3	2.2	11.6	12.9	7.9	11.7	9.3	9.7	10.6	11.2
1911	2.6	6.8	9.7	4.7	12.1	12.1	11.9	11.7	9.3	8.6	10.6	11.2
1916	3.2	7.9	12.8	2.1	17.5	14.4	15.5	41.4	16.8	18.1	19.4	21.4
1921	5.4	9.6	22.0	1.9	23.7	18.8	19.4	22.0	18.1	17.6	20.1	28.7
1926	4.6	12.0	16.3	3.7	21.2	16.2	16.4	20.3	15.7	17.6	20.7	24.0
1931	3.4	12.8	16.8	1.9	17.1	12.0	13.0	16.5	13.0	10.8	14.8	17.9
1936	3.7	12.6	17.9	2.4	15.0	14.9	11.1	15.0	14.6	15.4	16.8	18.1
1941	4.6	16.8	17.9	2.4	18.4	15.9	16.0	19.8	16.5	15.9	17.2	23.1
1946	4.6	12.5	17.9	2.2	19.3	20.5	19.3	24.7	20.1	21.2	21.2	26.0
1951	7.8	21.3	21.2	7.6	27.9	40.8	21.8	42.3	38.1	42.1	40.1	67.2
1956	12.4	40.3	36.6	20.5	51.0	54.1	34.6	73.4	55.6	55.6	43.9	106.3
1957	12.8	39.1	38.4	11.1	50.5	54.8	35.4	72.1	52.9	54.0	42.1	104.1
1958	13.2	38.6	38.4	9.0	49.7	54.6	34.2	74.7	54.5	52.7	39.0	102.5
1959	13.6	38.4	38.4	12.0	50.0	55.0	34.4	79.4	59.3	49.2	33.7	103.8
1960	14.1	37.8	41.0	10.9	51.6	55.0	37.7	92.2	73.2	54.9	41.9	118.8
1961	14.5	38.3	42.3	20.2	52.4	57.1	39.5	98.3	85.8	56.2	45.9	119.5
1962	14.9	37.1	42.3	12.7	52.6	56.1	38.5	89.7	74.5	51.8	39.7	113.1
1963	15.2	36.5	42.3	9.3	53.2	57.6	39.5	95.2	76.9	54.7	41.0	123.5
1964	15.3	36.3	42.1	14.8	53.9	56.1	42.8	98.8	79.6	58.6	47.6	130.1
1965	15.7	36.3	41.8	20.5	54.7	60.2	49.6	111.3	87.3	65.7	55.8	136.5
1966	17.0	36.5	41.8	11.3	56.7	63.0	52.7	119.0	94.6	69.2	57.5	140.2
1967	18.0	36.6	46.0	15.5	57.3	65.7	54.9	125.9	100.5	71.4	62.2	145.1
1968	19.1	36.4	49.0	15.2	57.3	62.2	56.3	122.1	138.9	108.5	111.8	149.5
1969	20.1	35.2	49.2	13.4	59.7	68.3	54.6	116.0	135.8	106.3	108.0	147.5
1970	21.3	33.9	49.0	14.1	60.6	67.7	55.6	122.6	138.9	197.6	109.3	147.5
1971	23.5	35.3	48.0	14.5	62.0	64.4	55.2	127.4	144.4	107.4	107.6	148.8
1972	24.9	36.7	48.4	16.3	63.9	67.4	56.9	127.2	149.9	113.3	114.0	151.9
1973	27.0	35.6	47.9	20.5	63.9	75.2	57.6	145.3	175.0	148.8	149.3	171.3
1974	31.2	37.2	48.0	30.4	67.5	58.8	75.6	153.9	201.3	170.9	174.8	220.0
1975	39.2	49.7	52.4	19.6	77.0	93.7	91.9	136.7	180.8	171.5	173.1	256.6
1976	45.1	53.0	56.7	33.7	85.2	109.2	111.6	163.1	201.1	197.1	198.2	302.7
1977	48.8	92.3	63.5	26.6	91.5	123.4	123.0	181.4	218.7	238.9	240.0	326.1
1978	52.0	88.5	68.8	35.8	91.3	128.5	126.5	202.3	247.5	269.8	277.8	344.5
1979	57.0	79.5	85.3	39.5	94.8	138.5	149.5	333.8	379.5	332.8	349.3	415.3

(a) In almost all cases the table units are not necessarily those for which the original price data were obtained. In such cases, prices have been calculated for the table unit.

(b) From 1968 prices shown are for 'Silverside, lamb (leg), lamb chops (loin)', respectively.

## Appendix B

### METRIC CONVERSION FACTORS

Unit		Conversion factor	
Imperial	Metric	Imperial to metric (multiply imperial by)	Metric to imperial (multiply metric by)
Length			
inch (in)	centimetre (cm)	2.540 00	0.393 701
foot (ft)	metre (m)	0.304 800	3.280 84
yard (yd)	metre (m)	0.914 400	1.093 613
mile	kilometre (km)	1.609 34	0.621 371
nautical mile	kilometre (km)	1.852 00	0.539 957
Area			
square foot (ft <sup>2</sup> )	square metre (m <sup>2</sup> )	0.092 903 0	10.763 9
square yard (yd <sup>2</sup> )	square metre (m <sup>2</sup> )	0.836 127	1.195 99
acre (ac)	hectare (ha)	0.404 686	2.471 05
square mile	square kilometre	2.589 99	0.386 102
Mass			
ounce (oz)	gram (g)	28.349 5	0.035 274 0
troy ounce (oz tr)	gram (g)	31.103 5	0.032 150 7
pound (lb)	kilogram (kg)	0.453 592	2.204 62
hundredweight (cwt)	kilogram (kg)	50.802 3	0.019 684 1
short ton (sh ton)	tonne (t)	0.907 185	1.102 31
ton	tonne (t)	1.016 05	0.984 207
Volume			
pint	litre (L)	0.568 261	1.759 75
cubic foot (ft <sup>3</sup> )	cubic metre (m <sup>3</sup> )	0.028 316 8	35.314 7
cubic yard (yd <sup>3</sup> )	cubic metre (m <sup>3</sup> )	0.764 555	1.307 95
bushel (bush)	cubic metre (m <sup>3</sup> )	0.036 368 7	27.496 1
super foot true	cubic metre (m <sup>3</sup> )	0.002 359 74	423.776
super foot hoppus	cubic metre (m <sup>3</sup> )	0.003 004 51	332.833
ton measure (40 cubic ft)	cubic metre (m <sup>3</sup> )	1.132 67	0.882 868
imperial gallon (gal)	litre (L)	4.546 09	0.219 969
proof gallon (pf gal)	litre alcohol (L al)	2.595 7	0.385 3
Energy			
British thermal unit (Btu)	kilojoule (kJ)	1.055 06	0.947 813
Power			
horsepower (hp)	kilowatt (kW)	0.745 700	1.341 02
Temperature			
degree Fahrenheit (°F)	degree Celsius (°C)	$^{\circ}\text{C} = \frac{5}{9} (^{\circ}\text{F} - 32)$	$^{\circ}\text{F} = \frac{9}{5} ^{\circ}\text{C} + 32$

NOTE: 1 hectare (ha) = 10 000 square metres (m<sup>2</sup>)  
1 square kilometre (sq km) = 100 hectares (ha)  
1 tonne (t) = 1 000 kilograms (kg)  
1 litre (L) = 1 000 cubic centimetres (cc) = 1 000 millilitres (ml)  
1 cubic metre (m<sup>3</sup>) = 1 000 litres (L)

## Appendix C

### CHRONOLOGY

#### The Year 1980

##### January

A seven-year program sponsored by the Federal and State governments was approved to conserve and develop the historic Port Arthur region. The Federal Government's approval of a joint fishing venture between Tasmania and the Soviet Union was withdrawn as part of the Australian Government's protest against the Soviet invasion of Afghanistan. Flames fanned by 100 kmh winds and fuelled by tonnes of drying timber razed a sawmill at Sulphur Creek causing damage worth several hundred thousand dollars. Henry Jones (IXL) Ltd, invested \$4m into the development of hops at Gunns Plains. Qantas asked the Federal Government for permission to run an air service between Hobart and Christchurch, New Zealand. A review of wilderness safety procedures to be made by the State Government after several recent, intensive police operations in wilderness area. A fire at Burnie's Lactos cheese factory caused more than \$250 000 worth of damage.

##### February

Work commenced on the first stage of the second Hobart bridge. The State Government approved a radical new system of 'government by consensus' which offers the Opposition and the Legislative Council the chance to have a say in the Government's decision-making process. The Liberal and Legislative Council members were invited to participate with the Government in pre-Budget and pre-Premiers' Conference consultations. Five Royal Australian Navy ships visited Hobart for the Royal Hobart Regatta. *Strident King* won the Hobart Cup. Fire destroyed about 600 ha of bush in the Freycinet National Park. Federal Government approved proposals for the Hobart-Christchurch air link. The Federal Minister for Productivity, Mr. Newman, proposed a potentially lucrative scheme which could make Tasmania a major exporter of electricity. It would involve Tasmania supplying premium peak-time power to Victoria by day via an undersea cable and importing cheap off-peak electricity by night. The Mt Lyell Mining and Railway Company at Queenstown repaid in full the \$2.3m nett assistance received from the Federal Government since 1977. This was repaid sooner than anticipated and the Company had not drawn on a further \$7 600 000 subsidy promised. The State Government agreed to give financial backing for the establishment of a high powered economic analysis centre at the University of Tasmania. The Premier said that the centre would be a major aid in determining the impact of economic decisions on the State. Air Tasmania Pty Ltd, merged with a Melbourne aircraft company, Bass Air. It will mean a multi-million dollar expansion into turbo-jet aircraft, an upgrading of the existing Tasmanian intrastate passenger service and increased freight access for Tasmanian intrastate passenger service and increased freight access for Tasmanian businesses to lucrative interstate markets. The Minister for Education, Mr Holgate, announced that the University of Tasmania will control teacher education in the South from the beginning of next year and the \$40m Mt Nelson College of Advanced Education campus is likely to be used as a community college. A survey conducted by the Australian Tourist Commission showed Tasmania as Australia's top tourist destination. A by-election for the Denison electorate was held after the 'electoral crisis' of the 1979 State election (see 1979 *Tasmanian Year Book* pp. 594, 595). The seven seats were won by three Labor, three Liberal and one Australian Democrat member, Dr Norman Sanders. The State Government accepted an Opposition proposal that it invite the Federal Government to use the Mt Nelson College of Advanced Education campus as a defence forces academy. The State Opposition proposed a scheme to provide permanent irrigation for the drought-stricken South East. The Government's youngest minister, Mr Polley (30), resigned from the Cabinet because of family reasons. Caucus unanimously chose Mr Lohrey as his replacement. The Repco Bearing Company announced a \$5.4m expansion

at its Launceston factory. The project results from a contract with General Motors to produce parts for its 'world car'. *Summer Fleur* won the Launceston Cup. Electrona Carbide borrowed \$4m from a Sydney merchant banking group after another crisis faced the Company. Communist bloc countries had placed a virtual boycott on Australian carbide products.

### March

Eight people drowned after a series of boating accidents around the State during the March long-weekend. A.P.P.M. announced that it was considering establishing a \$150m paper machine at Wesley Vale which would create hundreds of jobs and triple present sales. Two members of the Legislative Council alleged that they were threatened by two Government ministers. The allegations were referred to the Legislative Council Privileges Committee. Mr Geoff Coates alleged that Dr Amos uttered threats against him to influence his vote and Mr Ken Lowrie alleged that Mr Neil Batt insulted and menaced him as a consequence of a vote. Labor M.H.A., Mr John Devine, was alleged to have made a false statement in his electoral expenses return after the general election in 1979. He pleaded guilty to the charge of knowingly making a false statement. The Hobart City Council approved the establishment of a refugee centre at Mount St Canice which will house 60 Vietnamese refugees. Large coal reserves were discovered in a seam in the Fingal Valley. A new Mt Coast tin mine was forecast following the release of promising drilling results from Mt Bischoff. Over 30 000 people turned up at Launceston's City Park where restaurants and wine companies held an extravaganza as part of the John Batman Festival. The Committee on Primary Education (COPE) released its report. It called for more staff to reduce class sizes and for a radical change where classes should be based on the child's level of development rather than grades or ages. The Westbury Council approved building plans worth \$9m for the Tasmanian Country Club Casino to be built outside Launceston. T.A.A. won Federal Government approval for year-round 40 per cent discount advance-purchase fares. A plantation of cannabis plants with a street value of \$30 000 was discovered at Preolenna. With the threat of fuel strikes in Tasmania, the State Government drafted emergency legislation for petrol rationing. Gale force winds in Southern Tasmania ruined at least 50 per cent of the apple export crop. The State Government announced that it would inject another one million dollars into Electrona Carbide Industries in a last-ditch attempt to keep the company solvent. In addition to this, the Government guaranteed a further \$10m in loans to the Company. The Minister for Mines, Mr Lohrey, said that Fingal Valley coal reserves were known to be large enough for two 200 megawatt thermal power stations. Four Liberal candidates in the 1979 State elections were fined under the *Electoral Act*—Mr Max Bushby and Mr Terry Bowen both filed their returns late and Mrs Wills and Mr Beattie both failed to lodge returns. Electrona Carbide Industries announced plans to borrow another \$5m to help it through its liquidity problems. One condition of the loan was that the Government increase its investment in the Company by \$1m. The State Treasurer, Mr Batt, said that the Tasmanian Government would work with other state governments for the removal of sales tax. The Treasurer introduced legislation into the House of Assembly to allow \$530m to be spent on the H.E.C.'s Pieman River development. A plantation of cannabis with a street value of more than \$500 000 was found at Longford in the State's biggest drug haul. More than 3 000 cannabis stalks and 110 kg of harvested cannabis were found. One man died after the Lebanese livestock carrier, *Farid Fares* caught fire off the coast of South Australia. The Polish vessel *Denbola* rescued 71 crew members and brought them to Hobart. The ship had later sunk and wreckage was spotted by an RAAF Orion search plane. The State Department of Health approved for butchers to compete with supermarkets by selling other goods. O.B.M. Pty Ltd, one of Tasmania's oldest bookstores was sold to Sydney based publisher and bookstore chain Angus and Robertson.

### April

In a submission to the Government, the National Parks and Wildlife Service questioned the political motives and professional competence of the Hydro-Electric Commission. The Legislative Council agreed to the Government's plan to increase, by up to \$4m, its cash stake in Electrona Carbide Industries. The Premier, Mr Lowe, outlined prospects for trade and joint venture development between Tasmania and China's Fujian Province. Plans to have a joint select committee of Parliament inquire into the proposed flooding of the Lower Gordon and other alternatives were abandoned and the final decision on the next major power scheme

to be made by the Government alone. The Hydro Electric Commissioner, Mr Ashton, said that Tasmania had no power to spare for an electricity grid to South East Australia. The Federal Government announced that Australian motorists using LP gas will pay about half the price of petrol for their fuel. Tasmania's trial system of "government by consensus" started with discussions on many issues. Community interest groups were invited to express their views to a panel of Government, Opposition and Legislative Council members. The Federal Government announced that the new \$25m marine science centre run by the C.S.I.R.O.'s division of Fisheries and Oceanography will be transferred from Cronulla, N.S.W. to a site near Hobart. It will ultimately employ up to 300 persons. The Tasmanian Olympic Council voted strongly to back the Federal Government's call for an Olympic Games boycott. The \$6.2m Curries River Dam near George Town was opened. A \$7m takeover bid for Tasmanian Board Mills Ltd, was made by H. C. Sleigh Ltd, the parent company of Northern Woodchips Pty Ltd. Launceston based Redline Coaches took over Tasmanian Coach Lines. The Legislative Council rejected government moves to amend the *Electoral Act* whereby candidates would have been able to spend \$3 000 on election campaigns. It is presently \$1 500. The Prime Minister pledged support for establishing the international headquarters of the Antarctic treaty nations in Hobart. Federal Pacific Hotels announced plans for developing a \$10m convention and entertainment centre catering for over 1 000 delegates at any one time. The controversial Electrona Carbide plant bill was passed by the Legislative Council which permitted the Government to sell the carbide plant to White Industries for one dollar. Oil shale deposits showed promising results according to tests done by Petro Quest Pty Ltd.

### May

Petro Quest Pty Ltd, said that tests for oil shale showed promise in the Wynyard area. The State Minister for Housing and Construction, Mr John Coughlan resigned from Cabinet for personal reasons. Subsequently, Mr Baldock was re-elected to the Cabinet and there was a minor reshuffle of portfolios. The Department of Housing and Construction was dismantled because the combination proved too expensive and unwieldy. The State Government chartered a commercial airliner for a top level diplomatic delegation from 13 countries to visit Hobart to investigate the prospects of the city becoming the site of the International Antarctic Commission Headquarters. A report released by the Department of Planning and Development said that exploitation of Tasmanian timber reserves could lead to the near extinction of species used as hardwood sawlogs. The Prime Minister, Mr Fraser, officially opened the Australian Maritime College at Beauty Point. A Commonwealth-State working party was formed to investigate the possibility of a floating dock for Hobart. The Hobart Football Club won the inaugural Winfield Cup Final—the first statewide football competition. Launceston's Penny Royal Group asked the Launceston City Council to approve a \$2m tourist project which included an artificial snow ski run; a sky train and an artificial river. An American company, Weaver Oil, was granted permission to begin a \$7m oil exploration program in the Tasmanian sector of Bass Strait. Hobart was selected as the site for the permanent headquarters of the International Division for the Conservation of Antarctic Marine Living Resources. Australia's Olympic Federation voted 6-5 in favour of going to the Olympic Games in Moscow. Tasmania's delegate to the Federation Mr Eric McRae resigned after the decision. Legislative Council elections saw the return of Mr Ken Lowrie in Buckingham, Mr George Shaw in Macquarie and Mr Dick Archer in South Esk. Stand-downs occurred at A.P.P.M. Ltd's Burnie mill after a union ban on the unloading of log trucks. This move followed a warning that militant unions could cause a long-term shutdown of the plant.

### June

A State Government report suggested that an immediate start on a thermal power plant be made as well as a small hydro-electric power scheme. The contractors for the \$27.5m second Derwent crossing are to be Leighton Contractors Pty Ltd, and Candac Ltd. East-West Airlines were given approval for the only direct Hobart-Sydney air service. Tasmania's State parliamentarians granted a pay increase of almost eight per cent. An estimated 6 000 people in Hobart attended a rally and march organised by the Tasmanian Wilderness Society to gather support to save the Franklin and Lower Gordon rivers from proposed dams. A three-weeks strike affecting Bass Strait oil rigs was a major factor in a petrol crisis in most eastern

states but Tasmania had ample supplies. The world-wide Hilton hotel group had preliminary discussions with a Tasmanian company about building a \$15m hotel in Hobart. The State Liberal Opposition supported the H.E.C.'s proposed Gordon-below-Frankling Scheme. Pacific Enterprise Corporation Pty Ltd, announced the development of a new 200 bedroom hotel—'Hobart International'. It will probably be built on the Hobart City Council's carpark in Kirksway Place. The Premiers' Conference in Canberra saw Tasmania receive increases of 10.4 per cent in Commonwealth payments and loan allocations for 1980-81. It was revealed that piracy is costing Tasmanian commerce over \$100 000 each year. The piracy is in the form of goods stolen from containers or ships. Seventy per cent of containers that arrive in Hobart have been breached. The Australian Heritage Commission included Tasmania on the register of the National Estate, setting strict guidelines for future development including the highly controversial Franklin and Lower Gordon Rivers.

### July

The National Parks and Wildlife Service started a major advertising and promotion campaign aimed at short-circuiting the H.E.C.'s proposal to flood part of the Franklin-Lower Gordon power scheme. In Australian Rules Football, Tasmania defeated South Australia at North Hobart oval. General Jones announced a \$1m expansion program at Smithton. State Cabinet decided in favour of hydro rather than thermal generation for Tasmania's next power development. The H.E.C. recommended the conversion of the Bell Bay power station from oil to coal fired. The cost of boiler replacement would be \$120m. The film 'Manganinnie' had its world premier in Hobart and showed that Tasmania has the artistic and technical competence to promote its films internationally. The Federal Government gave the 'go-ahead' for the Hobart-Christchurch air link to operate from November 1980. The run would be serviced by T.A.A. and Ansett but would operate under Qantas flight numbers. The State Government decided to save the Franklin River by opting for a more expensive set of hydro-power schemes in the South West. The Franklin River would be included in a Wild Rivers National Park which will be extended to include the Davey River. The decision was to flood the Gordon at the junction of the Olga and to construct four single stage schemes on the King River. The Government also told the H.E.C. to investigate several small power schemes outside the South West. The Arbitration Commission granted a 4.2 per cent National Wage increase. The State Liberal Opposition put forward a motion of no-confidence in the Government following the decision to save the Franklin River. The Federal Government may be asked to help meet the costs of saving the Franklin River from power development. A former Premier, Mr Eric Reece, advocated the formation of a State-wide electricity consumers' defence organisation. It was revealed that during 1979-80 the State Government underspent on its building program by \$6.3 m and put the money towards its commitment to the Electrona Carbide works. Another \$6m will be diverted in 1980-81 which could result in cuts in State Government services. The Queenstown Council voted to support the H.E.C.'s Franklin-Lower Gordon proposals. Bass Strait Oil and Gas Company announced an \$11.5m exploration program in the Tasmanian sector of Bass Strait. The Mt Lyell mine at Queenstown, in danger of closing two years ago, is planning a multi-million dollar expansion following a record \$5m profit. The Deputy Premier and National A.L.P. President, Mr Neil Batt, resigned from both posts to become chief of UNICEF operations in Bangladesh. Federal Hotels announced a new convention centre-casino complex able to cater for 2 000 delegates. The centre will be built over the water behind the carpark at Wrest Point. State Government Caucus elected Michael Barnard as Deputy Premier after the resignation of Mr Batt. Mrs Gill James filled the Cabinet vacancy. The State Government gave the official go-ahead for construction to start on the \$18.5m Country Club Casino complex near Launceston. Probably the most credible sighting of a Tasmanian tiger in recent years was reported near Mole Creek.

### August

Tasmania made a top level bid to reverse an American proposal which would prevent Tasmanian alkaloid being exported to the U.S. Tasmania's Agent-General in London, Mr Bill Neilson, had his term extended by six months until July 1981. A contract, worth \$5m, was signed by Australia Post with Mercury Walch for the printing of aerograms, pre-stamped envelopes, newspaper wrappers, letters, cards and first day covers. More than 400 Savage River Mines employees were stood down after talks between the company and the Transport



Workers Union failed. Northern Woodchips signed a new contract with a south Korean company. They will supply 90 000 tonnes of woodchips, each year for five years. The Federal Government announced that Tasmania's textile industry will get increased protection from overseas competition for another seven years. A report tabled in the Legislative Council recommended sweeping boundary changes for three Legislative Council divisions—Tamar, Meander and Mersey and minor changes to Launceston, Cornwall, West Morland and South Esk.

### September

The State Government may pioneer a job-sharing scheme in Tasmanian schools in 1981 with an imminent teacher-job crisis. This would involve two people sharing one job. Fierce competition between supermarkets resulted in all-day Saturday trading by several supermarkets but the Government said it would legislate to stop Saturday afternoon trading. Mr Bob Graham replaced Mr Neil Batt in State Parliament after a five-way count-back of Mr Batt's primary votes. Parts of Southern Tasmania were facing the worst drought since white settlement. East Devonport carpet manufacturer, Tascot Templeton, retrenched 29 employees. It blamed the retrenchments on increasing competition from New Zealand's manufacturers. The State Government Budget was rather harsh. The blame for this was put on the less generous flow of funds from the Commonwealth. The State Government gave the go-ahead for Ansett and T.A.A. to fly from Hobart to Christchurch. St John's, a private hospital, was almost bankrupt and the financial viability of several others was threatened following changes to Australia's health benefits scheme when insurance became optional. In Australian Rules Football: T.F.L. Grand Final saw Hobart defeat Glenorchy; N.T.F.A. Grand Final saw North Launceston defeat City South; and N.W.F.U. Grand Final saw Penguin defeat Wynyard. The Chairman of Mt. Lyell Mining and Railway Co. Ltd, announced plans to spend more than \$14 m over the next three years in upgrading its copper operations at Queenstown. Renison Ltd, found a further 700 000 tonnes of tin ore on its West Coast lease. The Education Department was looking for ways to cut its administrative and research sections in a bid to provide jobs for the 200 bonded students who face unemployment in 1981. All four Hobart stores of Coles were evacuated after a hoax bomb threat. A rowdy meeting of teachers, students and parents in Launceston called on the Minister for Education, Mr Holgate, to resign. The proposed Hobart-Christchurch air link was jeopardised by no satisfactory agreement being reached by the Australian and New Zealand governments. The Auditor-General revealed a multi-million dollar list of State Government mistakes and failures in control of construction projects. A.P.P.M. announced that it will spend \$35 m over the next two years in converting its energy source from oil to a combination of coal, wood waste and bark. During 1979-80, only 15 000 people visited the controversial Bowen Park 'pyramids'. Another meeting of 1 300 teachers and parents called on Mr Holgate to resign because of a breach of an unconditional guarantee in Parliament.

### October

The H.E.C. announced that charges will be increased by 11 per cent from 1 January 1981 to provide capital funds for the Commission's essential works program. The Minister for National Parks and Wildlife, Mr Lohrey, admitted he was paying off an Education Department studentship bond which raised doubts about the legality of laws passed since 1977 because he illegally had a contract with a State Government department. A report by the *Examiner* newspaper suggested inefficiencies in the Education Department because, of the 12 000 employees of that Department, 7 000 were in administration. 500 striking confectioners returned to work at the Cadbury-Schweppes factory at Claremont after a three-week dispute. A feasibility study for a Wesley Vale pulp mill would be considered by A.P.P.M. and six major Japanese companies. 1 000 direct and indirect jobs could be created by the plan. Angela Potter was crowned Miss Tasmania 1981. The Tasmanian Potato Industry Authority became inoperative as there were only three members—not enough for a quorum. Tasmania's controversial proposal for a Russian floating dock culminated after the Premier, Mr Lowe, broke off negotiations in Moscow due to legal problems under Federal law. Wander Australia Pty Ltd, announced the conversion from oil to coal for its energy. The conversion will cost \$700 000 but will mean a saving of \$300 000 on the annual fuel bill. The Port of Launceston could service Soviet fishing boats after the collapse of the Hobart floating dock proposal. The Soviet fishing agency, Sovrybflot, expressed interest in the Authority's

synchrolift dock servicing smaller boats in the fishing fleet. Staff in the Agent-General's office in London will be cut by half and the three senior positions of Agent-General, Trade Officer and Tourist Officer will be combined. The Federal Liberal—N.C.P. coalition returned to government with a reduced majority. The Tasmanian electorates saw the return of all five sitting Liberal members. Senators Rae and Towley (Liberal), Hearn and Coates (Labor) and Harradine (Independent) were elected to the Senate. An Opposition bid to reduce the State Government's 1980-81 assistance to Electrona Carbide by \$500 000 failed in Parliament. A scientific report showed that pollution levels emitted by Temco at Bell Bay are higher than legal limits in many instances. The report showed extreme levels of manganese in the work atmosphere and alarming amounts of pollutants being discharged into the Tamar River. The Burkett Report on the Royal Derwent Hospital, tabled in Parliament, confirmed isolated incidents of abuse of child patients and failure to maintain proper patient care. Restricted shop trading hours could be operating in Tasmania before Christmas as draft legislation to prevent large shops opening at weekends was approved by Cabinet and the Parliamentary Labor Party. The Minister for Local Government, Mr Field, announced that a recommendation will be made to the Governor, Sir Stanley Burbury, that the Devonport Municipality be granted city status. The Mt Nelson campus of the T.C.A.E. will be converted to a community college. Initially the College will provide accommodation for 800 H.S.C. students from Hobart's southern suburbs. Most jet services in and out of Tasmania stopped due to a twenty-four hour dispute by petrol-tanker drivers and aircraft refuellers. The Federal Minister for National Development and Energy, Senator Carrick, released a report which showed that a sugar beet ethanol industry in Tasmania would be able to compete with other forms of energy at current prices. Cadbury-Schweppes announced a \$2m investment plan or its Claremont factory.

### November

The new Fraser Ministry saw Michael Hodgman M.H.R. (Denison) become Minister for the Capital Territory and Minister assisting the Minister for Industry and Commerce. Kevin Newman M.H.R. (Bass) became Minister for Administrative Services and Minister assisting the Minister for Defence. Dismissal notices were handed to thirty employees at Electrona Carbide works who were on short-term jobs. A comprehensive report on Tasmania's coast would be the basis of most decisions affecting coastal development. The main recommendation of the report was the establishment of a coastal advisory council comprising representatives of relevant government departments and private and professional groups. The Minister for Community Welfare announced that major changes will be made to child care services in Tasmania following a report by the head of the School of Social Work at the T.C.A.E., Mr A. W. Jamrozik. A strike by T.W.U. refuellers virtually grounded all Ansett and T.A.A. flights in Australia. The H.E.C. claimed that power bills would increase, electricity would be rationed and a new thermal power station may be necessary if Parliament agreed to the Government's power development proposals. It also claimed that costs of constructing the Gordon-above-Olga and King River Schemes would be far greater than the H.E.C. recommended Gordon-below-Franklin Scheme. The Premier, Mr Lowe, rejected these claims. Ansett and T.A.A. were granted permission to start a twice weekly service between Hobart and Christchurch on 3 December 1980. The Electrona Carbide plant had lost about \$4 million since White Industries had taken it over earlier in the year. The Tasmanian Economic Survey Team recommended phasing out payroll tax, the abolition of death duties, and the creation of a small business bureau and an agricultural development council. 900 workers returned to work at the Electrolytic Zinc Company's Rosebery mine after the longest strike in Rosebery's history. The strike cost \$2 million in wages and the lost production of 90 000 tonnes of ore. The Minister for Housing, Mr Baldock, announced a new, no-deposit, low interest loan housing scheme from the Agricultural Bank for low income earners. The Federal Department of Primary Industry was blamed for losing the 1981 Australian-Japanese squid venture. The Gordon-above-Olga power scheme was passed by the House of Assembly. The Legislative Council blocked passage of the State Budget until the Government agreed to decrease, by \$2 million, the allocation to the Treasurer's Reserve. The Premier admitted that Tasmania's bureaucracy was being reformed because it had resisted the implementation of Labor Party policy.

*December*

The Legislative Council Select Committee on the Tourist Industry recommended that the Department of Tourism should be re-established as an independent statutory authority under ministerial control. The first direct flight from Hobart to Christchurch was made by Ansett Airlines. The Australian Bureau of Transport Economics recommended that a two-ship passenger and freight service between Westernport Bay (Victoria) and Burnie be introduced. Legislation was passed by the House of Assembly for a 10 per cent tobacco tax despite strong objections from the Opposition. The State Government withdrew its plan to introduce legislation to control shop trading hours at weekends. The Hobart Drug Squad seized an estimated \$500 000 worth of marijuana plants from a farm in southern Tasmania. The State Government announced plans to back development of a major new industry by United Milk Products. This would allow the Company to process whey and lactose products which now go to waste. The Upper House Select Committee recommended the H.E.C.'s proposed Gordon-below-Franklin Scheme and rejected the Government proposed Gordon-above-Olga Scheme. The Federal government approved the take-over of Burnie cheese manufacturer, Lactos Pty Ltd, by the French company Bongrain S.A. The Consumer Affairs Council claimed that Tasmanian consumers have been left out in the cold by the State Government's lack of legislative action. The Hobart City Council approved the building of the new \$15 million Hobart Hilton Hotel. A State constitutional crisis arose as the Legislative Council voted to dissent from the ruling of the President of the Legislative Council. The Council voted that it had the power to change the power scheme bill to the Franklin rather than the Olga Scheme. The State Opposition Leader, Mr. Pearsall, called for a double dissolution of Parliament. The New Zealand sloop *Ceramco New Zealand* took both line and handicap honours in the Sydney-Hobart Yacht Race. The winner on handicap of the Queenscliff-Devonport Yacht Race was *Bandit*; line honours went to *Wallaby Bob*. The winner on handicap of the Melbourne-Hobart 'Westcoaster' was *Relentless*; line honours went to *Nimrod*. The road toll for 1980 was 100; nine more than 1979. Figures released by the Commonwealth Employment Service showed Tasmania's unemployment as 8.7 per cent of the workforce which represents the highest unemployment rate of all the Australian states.

## PUBLICATION OF TASMANIAN STATISTICS

### HOW TO OBTAIN CURRENT PUBLICATIONS

#### General

The Tasmanian Office of the Australian Bureau of Statistics is located in the *Commonwealth Government Centre* at 188 *Collins St., Hobart*. Requests for statistical publications can be made by calling at this address; by phoning the Information Officer on *Hobart 20 4495*; or by writing to the *Deputy Commonwealth Statistician, G.P.O. Box 66A, Hobart 7001*. Those requiring particular publications on a regular basis should ask to be placed on the publications mailing list.

Service to the public is not restricted to the distribution of publications. If no publication adequately covers the subject matter of the inquiry, then a special extraction of the data required may be undertaken if they are readily available from the basic records held in the office. The guide, *Catalogue of Publications* (1103.6), *Tasmanian Office*, 1980, includes descriptions of all Tasmanian Office publications together with a detailed subject index and is available free of charge.

#### Historical

Before the appointment of the first Government Statistician in Tasmania in 1867, statistics had been published in the official 'Blue Books' compiled by the Colonial Secretary during the period 1822-1855, and in volumes entitled *Statistics of Tasmania* after self-government was granted.

By the *Commonwealth and State Statistical Agreement Act 1924*, the Tasmanian Parliament ratified an agreement for the establishment of an office in Tasmania of the Australian Bureau of Statistics, such office to meet the statistical needs of the State Government; provision was made for the Deputy Commonwealth Statistician, a Federal Government officer, to hold, at the discretion of the State Government, the title of (State) Government Statistician. The first officer appointed in this way was L. F. Giblin, M.C., D.S.O., who had previously been the State Government Statistician. (It was not until the late 1950s that similar arrangements were made in the other Australian states.)

#### *Statistics from 1804*

In the Archives Office of Tasmania, the following series are available:

- (i) *Statistical Account of Van Diemen's Land or Tasmania, 1804 to 1854* compiled by Hugh M. Hull (Office of the Colonial Secretary).
- (ii) Official 'Blue Books' for the period 1822-1855.
- (iii) *Statistics of Tasmania*—annual publications from 1856 to 1922-23.
- (iv) *Statistics of the State of Tasmania*—annual publications commencing 1923-24 and continuing to 1967-68. (Copies of these volumes are held at the University Library, the State Library in Hobart, the Public Library in Launceston and the Tasmanian Office of the Australian Bureau of Statistics.) Although the bound volume entitled *Statistics of the State of Tasmania* has been discontinued as from the 1967-68 issue, the component parts are still published as separate bulletins.

Copies of publications listed under (i), (iii) and (iv) above, are available for inspection at the Tasmanian Office of the Bureau.

#### Current Publications of the Tasmanian Office

The Tasmanian Office of the Australian Bureau of Statistics is engaged in a continuous publication program, the statistics appearing in either 'for sale' or 'not for sale' publications.

The 'not for sale' publications (publications available free of charge) can be further dissected into annual bulletins and press releases. The press releases are issued with a view to making the statistical information available as soon as possible after compilation. Bulletins contain greater detail than press releases, but because of time taken to compile and print are issued some time after the period to which they refer. The two principal 'for sale' publications issued by the Tasmanian Office of the Bureau are the *Tasmanian Year Book* and *Pocket Year Book of Tasmania*.

The following table lists all recent publications issued by the Tasmanian Office. A similar table is included on the back cover of each issue of the *Monthly Summary of Statistics* and all annual bulletins, showing the latest available issues and their dates of publication.

Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)

Cat. no.	Publication	Latest issue (b)	Date of issue
GENERAL			
1101-6	Index of Towns, Localities and Standard Area Codes <i>irr</i>	1975	17-9-1975
1103-6	Catalogue of Publications, Tasmanian Office <i>irr</i>	1980	7-6-1980
1301-6	Tasmanian Year Book (\$8-00; \$9-00 Tas; \$10-30 interstate) <i>a</i>	1980	Sept. 1980
1302-6	Pocket Year Book of Tasmania (\$0-60; \$0-95 posted) <i>a</i>	1980	24-11-1980
1303-6	Monthly Summary of Statistics <i>m*</i>	July 1981	23-7-1981
1304-6	Compendium of Local Government Area Statistics <i>irr</i>	1979	10-7-1979
DEMOGRAPHY AND SOCIAL			
3101-6	Demography <i>a*</i>	1979	19-1-1981
3201-6	Estimated Population of Local Government Areas in Tasmania <i>a</i>	30 June 1980	7-1-1981
3202-6	Population and Vital Statistics <i>q</i>	Mar. qtr 1980	25-5-1981
3301-6	Death, Causes of <i>a*</i>	1979	3-11-1980
3401-6	Visitor Survey <i>Sole issue</i>	1978	23-4-1979
4202-6	Schools <i>a</i>	1980	27-3-1981
4203-6	Tertiary Education <i>a</i>	1980	21-7-1981
4302-6	Mental Health Statistics <i>a</i>	1979-80	4-11-1980
4502-6	Court Statistics <i>a</i>	1980	5-6-1981
4503-6	Prison Statistics <i>a</i>	1979-80	9-6-1981
4504-6	Police Statistics <i>a</i>	1978-79	27-5-1981
TRADE AND FINANCE			
5401-6	Trade and Shipping <i>a*</i>	1977-78	16-3-1981
5402-6	Trade, Overseas <i>a</i>	1979-80	24-12-1980
5501-6	Local Government Finance <i>a*</i>	1978-79	7-7-1980
5603-6	Friendly Societies, Report on <i>a</i>	1978	1-10-1979
LABOUR, WAGES AND PRICES			
6101-6	Labour, Wages and Prices <i>a*</i>	1979-80	18-2-1981
6301-6	Industrial Accident Statistics <i>a*</i>	1978-79	12-9-1980
AGRICULTURE			
7101-6	Agricultural Industry <i>a*</i>	1978-79	2-2-1981
7102-6	Principal Agricultural Statistics (preliminary) <i>a</i>	1980-81	26-6-1981
7201-6	Livestock Statistics (final) <i>a</i>	1979-80	21-11-1980
7202-6	Meat Production <i>a</i>	1979-80	14-10-1980
7203-6	Dairying and Dairy Products <i>a</i>	1979-80	19-1-1981
7204-6	Poultry Production <i>a</i>	1979-80	11-11-1980
7205-6	Wool Production and Disposal <i>a</i>	1979-80	26-2-1981
7206-6	Bee Farming <i>a</i>	1979-80	1-10-1980
7301-6	Crops and Pastures <i>a</i>	1979-80	19-6-1981
7302-6	Apples and Pears in Cool Stores (seasonal) <i>m</i>	Nov. 1980	18-12-1980
7303-6	Fruit <i>a</i>	1979-80	22-5-1981
7304-6	Potato Production <i>a</i>	1979-80	13-4-1981
7401-6	Rural Establishments, Number of, Irrigation and Fertiliser Usage <i>a</i>	1978-79	15-2-1980
7501-6	Agricultural Commodities Produced, Value of <i>a</i>	1979-80	29-6-1981

## Publications of the Tasmanian Office of the Australian Bureau of Statistics (a)—continued

Cat. no.	Publication	Latest issue (b)	Date of issue
MANUFACTURING, MINING AND BUILDING			
8202-6	Census of Manufacturing Establishments, Details of Operations and Small Area Statistics <i>a</i> *	1978-79	24-11-1980
8203-6	Sawmilling, Woodchipping, etc. Statistics <i>q</i>	Mar. qtr. 1981	8-7-1981
8204-6	Survey of Household Energy Sources <i>irr</i>	Nov. 1979	24-3-1981
8301-6	Productive Activity, Miscellaneous Indicators of <i>m</i>	Mar. 1981	24-6-1981
8401-6	Mining <i>a</i> *	1978-79	22-9-1980
8601-6	Retail and Selected Services Establishments (Economic Census) <i>irr</i> *	1973-74	2-10-1975
8602-6	Wholesale Establishments (Economic Census) <i>irr</i> *	1968-69	24-8-1973
8603-6	Tourist Accommodation <i>q</i>	Dec. qtr 1980	5-6-1981
8604-6	Tourist Accommodation Establishments, Census of <i>irr</i> *	1973-74	29-8-1975
8701-6	Building Industry <i>a</i> *	1979-80	19-12-1980
8702-6	Building Approvals <i>m</i>	May 1981	10-7-1981
8703-6	Building Statistics <i>q</i>	June qtr 1980	7-11-1980
	Dwelling commencements <i>m</i>	Jan.-Mar. 1980	16-6-1981
TRANSPORT			
9301-6	Motor Vehicle Registrations <i>m</i>	Mar. 1981	3-6-1981
9302-6	Motor Vehicle Census <i>irr</i> *	30 Sept. 1979	12-5-1981
9401-6	Road Traffic Accidents Involving Casualties <i>q</i>	Dec. qtr 1980	18-6-1981
9402-6	Road Traffic Accidents Involving Casualties <i>half-yearly</i>	30 June 1980	12-11-1981

(a) Publications are free of charge unless a price is shown. The name of each publication is followed by a symbol indicating the frequency of publication as follows: *m*—monthly, *q*—quarterly, *a*—annual, *irr*—irregular.

(b) As at 6 August 1981.

\* Statistical bulletin. These are generally at least 20 pages in length compared with most other publications which are the shorter 'press releases'.

## TASMANIAN STATISTICS IN CENTRAL OFFICE PUBLICATIONS

Although publications of the Tasmanian Office of the Australian Bureau of Statistics make available statistics on many aspects of the State, there are some fields in which additional or more frequent information is available in publications of the Central Office.

## How to Obtain Central Office Publications

Central Office priced publications may be bought direct from the Australian Government Publications and Inquiry Centres at 113 London Circuit, Canberra or 162 Macquarie St., Hobart, or from the Tasmanian Office of the Australian Bureau of Statistics. A standing order may be placed with the Australian Government Publishing Service, P.O. Box 84, Canberra, A.C.T. 2600, with whom a credit account may be arranged. In addition to publications for which a charge is made, there are other Central Office publications which may be obtained free of charge by 'phoning Canberra (062) 52 6627 or Hobart 20 4495 or by writing to Information Services, Australian Bureau of Statistics, P.O. Box 10, Belconnen, A.C.T. 2616.

## Subject Matter of Central Office Publications

The fields of statistical inquiry covered in Central Office publications are very wide (about 270 different titles are issued annually) and the best way to obtain a guide to the material available is to write to: *The Australian Statistician*, P.O. Box 10, Belconnen, A.C.T. 2616 and ask for the booklet *Catalogue of Publications* (1101.0). Copies of this guide are also available at the Tasmanian Office of the Bureau. This free, comprehensive guide lists the publications of the Central Office and of the state offices; in addition, it contains a subject index to information covered by Central Office publications. Readers with interest in a particular field are invited to call at, or write to, the Tasmanian Office which is in a position to give advice on what publications are available.

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